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December 1948 Vol. 67 No. 6

The New Wage Chronology Series

Child Labor Trends in an Expanding Labor Market

Vocational Guidance and Labor Developments

International Cooperative Congress

D. C. Family Income and B L S Family Budget

United States Department of Labor • Bureau of Labor Statistics

UNITED STATES DEPARTMENT OF LABOR

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Monthly Labor Review

UNITED STATES DEPARTMENT OF LABOR • BUREAU OF LABOR STATISTICS

LAWRENCE R. KLEIN, *Chief, Office of Publications*

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This Issue in Brief...

THE NEW WAGE CHRONOLOGY SERIES (p. 581), while not an article in a strict sense, is accorded the leading position this month because it presents the first work of its kind published by the Bureau in this particularly usable and precise form. Most measures of wage movements reflect the trends of entire industries or groups of industries and usually deal with gross or straight-time earnings. The wage chronology seeks to subject to detailed analysis over a considerable period the wage changes and changes in related practices affecting wage payments (fringe benefits) of a specific (and usually leading) employer in an industry. The chronology will include study of general wage changes, minimum rates, and such related wage practices as guaranteed earnings, shift premiums, overtime, holidays and vacations, reporting, waiting, and down time, various benefit programs, etc. The first of the Chronology Series traces the changes put into effect by the American Woolen Co. in collective agreements with the Textile Workers' Union of America (CIO) between 1939 and 1948.

To most working families, of course, the meaning of wage movements is family income and the relation of income to level of living. D. C. FAMILY INCOME IN RELATION TO BLS FAMILY BUDGET (p. 622) shows that in 1947 about a third of all Washington families with a husband, wife, and two children under 18 had incomes below the budget required to maintain such families at a modest but adequate level of living. The average income of four-person families which include children under 18 was less than that for all four-person families. Presumably the older children worked.

The indication of multiple wage earners in many families leads to questions as to the extent and legality of the employment of young people in the United States. A partial answer is provided by CHILD LABOR TRENDS IN AN EXPANDING LABOR

MARKET (p. 589). Nearly 2½ million young workers between the ages of 14 through 17 were employed early last fall, about twice the 1940 total. While protective Federal and State legislation successfully curtails employment of the very youngest in manufacturing industries, the proportion of total work permits issued to minors 16 and 17 years old for factory work increased from 2 percent in 1940 to 36 percent in 1947 (it was 5 percent in 1943). In the 14-through-17 age group the proportion of students holding jobs in 1947 was 4 times the 1940 rate. Wage-hour law inspections recently revealed that nearly 20 percent of all establishments inspected were violating the child labor provisions of that act and that about 1 percent of the total employment of minors was illegal.

With hundreds of thousands of young people both in and out of school employed, what can be said for the vocational guidance they receive or which is available to them if they seek it? VOCATIONAL GUIDANCE: A GROWING FACTOR IN LABOR DEVELOPMENTS (p. 596) points up some of the problems and accomplishments of this expanding field. About half of all high-school students want to crowd into the professions which account for only about 6 percent of the labor force. Guidance acquaints the youth with such facts. No less important is its contribution in curtailing labor turn-over through proper job selection. Vocational guidance also aims at helping a worker achieve personal satisfaction with his job by matching worker characteristics and abilities with specific job requirements. Education departments in 44 States support guidance programs in the public schools, but only about a sixth of all public secondary schools maintain some kind of program.

THE INTERNATIONAL COOPERATIVE CONGRESS, SEPTEMBER 1948 (p. 600), was held in Prague. The 24 countries represented in the Congress promptly split along the line of political cleavage which has characterized all international meetings since the end of the war. Despite assaults by the delegates of the Soviet Union and its satellite countries, on some long-held tenets of the Congress, political and religious neutrality of the Congress and its opposition to nationalization of industries which cater to the individual consumer were reaffirmed.

The Labor Month in Review

ABOR LEGISLATION AND UNION POLICY on public issues were matters of first importance to labor during November. The two major labor organizations, meeting in annual conventions during the month, called for repeal of the Taft-Hartley Act and reenactment of the Wagner Act, and decided to remain "in politics." The Secretary of Labor was assigned by the President the task of reviewing past experience and studying legislation. New federal labor legislation and revision of restrictive state labor laws was asked for by the Fifteenth National Conference on State Labor Legislation. There was no official indication, by the month's end, of any specific recommendations the Administration might make to Congress.

The general level of business remained high during November, although there was a falling off in activity in certain areas. While nonagricultural employment increased with the pre-Christmas season, scattered lay-offs and reduced hours were being reported for a number of textile and other soft goods plants. There were indications that the decline in food prices, both in the primary markets and at retail, was continuing, although partially offset by increases in the prices of some other items, notably metals. A number of strike settlements, including the serious maritime strikes on both east and west coasts, brought relative quiet to the industrial relations scene toward the end of the month.

Union Conventions

The annual conventions of the American Federation of Labor and the Congress of Industrial Organizations indicated considerable similarity of thinking with respect to the Taft-Hartley Act, international relations, Communists within the labor movement, and other matters of labor interest.

Both conventions passed resolutions for the repeal of the Taft-Hartley Act, and reenactment of the Wagner Act, with neither group committing itself to specific amendment of the latter. The nature of any new labor legislation which the 81st Congress might enact has been the topic for considerable discussion in recent weeks. Secretary of Labor Tobin was given the task by the President, soon after the election, of drawing up recommendations to make to Congress on future labor legislation. He has promised to seek the advice of labor and employers.

The recent election results were the subjects of a great deal of discussion in both conventions, pointing to programs to influence legislation in a number of directions. The American Federation of Labor, departing from precedent, decided to maintain Labor's League for Political Education, as a permanent body, financed by a per-capita levy on affiliated organizations. The CIO reaffirmed its policy to confine its political activity to the two major parties and decided to finance its Political Action Committee through voluntary contributions of individual members.

There was a general agreement between the two conventions in the support of the European Recovery Program and in the prevailing anti-Communist attitude. The AFL showed considerable concern with the question of international relations and rebuilding the trade-union movements in the European nations. It adopted a comprehensive foreign policy resolution which denounced the Soviet Union. The convention heard reports of fraternal delegates from Europe, Latin America, Canada, and Australia, and from ranking officials of ECA. Communism as an internal problem was relentlessly attacked by the CIO during its convention. The attack was preceded by executive board action removing the charter of the Greater New York Industrial Union Council for "slavish adherence" to the "line and dictates of the Communist Party" and for failure to adhere to CIO policy. It was implemented by a post-convention action of the board ordering the Farm Equipment Workers Union to affiliate with the Auto Workers within 60 days. President Philip Murray pointed specifically to leaders of the public workers, office workers, and wholesale and retail clerks. He charged that if a Communist union officer is "unable to demonstrate his fitness to organize the unorganized * * * he should

resign." He castigated Communist influence in the labor movement as "damaging * * * devastating * * * degrading." The convention authorized the executive board to investigate the weakly organized affiliates and to take "appropriate action."

The Fifteenth National Conference on State Labor Legislation, meeting in Washington November 30, and December 1 and 2, was also concerned with national labor legislation. The Conference adopted a statement which favored new Federal legislation "under which employees shall have the right to self organization, to bargain collectively through representatives of their own choosing, and to engage in concerted activities for the purpose of collective bargaining or other mutual protection as provided for in the Wagner Act," but not necessarily its reenactment.

Strike Settlements

Several strikes of national significance were settled during November, but because of the relatively large number of workers involved in certain of them, more man-days were probably lost through work stoppages during the month than in October. In terms of the number of stoppages, however, the November statistics will probably continue the present down trend which is usually evident in the closing months of the year.

CIO longshoremen on the west coast ended their strike on November 25 by an agreement reached with the Waterfront Employers Association, providing for a nonretroactive wage increase of 15 cents an hour and increased vacation benefits. The highly controversial hiring hall problem was resolved by agreement on a continuation of present practices unless a court decision or Congressional action makes them illegal. The International Longshoremen's Association (AFL) ended their 18-day strike on the east coast on November 29 by an agreement with the New York Shipping Association which was recommended by Cyrus S. Ching, director of the Federal Mediation and Conciliation Service. Together with certain fringe benefits, the agreement provides for a 13-cent hourly increase in straight-time pay and a 19½ cent rise in overtime pay. The strike of the Oil Workers International Union (CIO) on the west coast was substantially concluded with additional settlements based on increases of 12½ cents an hour, the original offer of the companies.

Average hourly earnings, excluding overtime, remained unchanged in manufacturing from September to October at \$1.32. A substantial increase in the workweek, principally in the iron and steel and auto groups of industries, resulted in a rise in average weekly earnings to a new peak of \$54.64 for all manufacturing industries. The lengthening of the workweek in the durable goods group brought average weekly earnings up sharply for these workers to a record high of \$59.43. A drop in the average hours worked in the nondurable goods industries during the reporting week, with no change in average hourly earnings, caused weekly earnings to decline to \$49.61.

Prices Fairly Stable

Price developments during November were generally similar to those of the previous month. The month was marked by continued weakness in textile prices, from mill products to men's suits at retail. Retail food prices were down in some areas and wholesale food prices, on the average, were somewhat lower than in October. There were no significant changes in average farm prices, but the movement of metal prices was still upward as increases were announced for some nonferrous metals and a number of steel products.

The index of primary market prices remained relatively unchanged during November at about 165 percent of the 1926 average. The consumer price index in mid-October, declining for the first time since March, was 173.6 percent of the 1935-39 average, 0.5 percent below the all-time high reached in August and September, but 6 percent higher than October 1947.

Employment Variations

Reports of employment in early November, released by the Bureau of the Census in its Monthly Report on the Labor Force, indicate continuation of the generally favorable employment situation. Nonagricultural employment rose about 400,000 to 51.9 million, largely as a result of pre-Christmas increases in retail trade and allied fields. Agricultural employment declined seasonally by about 700,000, holding at the same level as a year ago. Unemployment increased by 200,000 between October and November to slightly over 1.8 million.

The New Wage Chronology Series

1. A Description of Changes in Wages and Related Wage Practices of the American Woolen Co., 1939-48

PHILIP ARNOW, JOSEPH W. BLOCH, and WILLIS C. QUANT

Editor's Note. —With this issue, the Monthly Labor Review presents the first in a series of chronologies detailing the recent history of the major changes in wage rates and related wage practices made by employers of large numbers of workers. Other wage chronologies will appear in subsequent issues of the Monthly Labor Review. It is anticipated that the series will be made available as separately issued bulletins, thus facilitating the maintenance of a current file of wage chronologies by users.

THE BUREAU OF LABOR STATISTICS currently maintains two basic series of statistical data reflecting the movement of money wages. One measures levels of gross average earnings, both weekly and hourly; the other measures the movement of straight-time average hourly earnings on the basis of constant employment weights. Both series are concerned with large aggregates—entire industries and groups of industries.

The wage chronologies provide a different approach to the recording and measurement of wage movements by concentrating on the wage changes made by specific employers, usually through wage agreements reached as a result of collective bargaining. Attention is directed not only to changes in wage rates but to changes in related practices affecting wage payments ("fringe" benefits).

The wage chronologies are intended primarily as tools for research and analysis. They will present the details of the wage agreements and the major wage actions entered into or undertaken by specific employers. As such, they will deal only with selected features of the varied history of collective bargaining or wage administration in each case. They will omit references to job security, union security, grievance procedure, employment practices, methodology of piece-rate adjustments, changes in cost of living, interunion rivalries, company profits, and many other elements that form the body of labor-management relationships.

Purpose and Scope of Chronologies

Wage adjustments in a relatively few situations, involving as a rule a large company or association and a large union, have played a well-publicized role in the wage history of recent years. Partly because of the great number of workers affected, and partly because of the influence that these adjustments might be expected to exercise over the wage policies of other companies and other industries, each adjustment has aroused considerable public interest. A new terminology designed to describe these situations and their part in

shaping wage developments has found its way into newspapers, trade and labor publications, and the technical journals; such expressions as "wage pattern," "wage leadership," "key situations," "first, second, and third rounds" are commonplace today.

The interest in wage adjustments has brought an influx of requests to the Bureau for information regarding the details of present and past wage actions of individual companies. These could not be adequately answered through the regular statistical series maintained by the Bureau. The chronologies are expected to satisfy a major part of the need for such information.

The nature of wartime and postwar wage developments has also created a demand for measures of wage-rate movements which reflect only across-the-board wage changes. The gross average hourly earnings series and, to some extent, the urban wage-rate series are influenced by factors other than general wage changes. The latter series is further subdivided to show the average percentage change in industry wage levels attributable to general wage changes. This aggregate measure is computed by combining situations involving increases, decreases, and no changes to obtain an average percentage change, a result useful for broad analysis but a reflection of no particular situation. The wage chronologies are intended as devices for reporting in detail and for cumulating over any given period the general wage changes affecting large specific groups of workers. Each chronology and the series as a whole should also be useful as aids in the analysis of the broader wage movements measured by the statistical series.

Still another significant aspect of the wartime and postwar picture is the growth in importance of "fringe" benefits which, in general, do not enter directly into wage rates. Nonetheless, they have a money value to the worker and to the employer. Wartime wage controls acted as a stimulant to the initiation or extension of various types of fringe benefits in lieu of wage-rate changes. By now certain practices, such as giving paid vacations to production workers, are widespread. An additional paid holiday, an extra week of vacation, the introduction of a new practice—these are elements entering into the give-and-take of wage ad-

ministration and collective bargaining. To show the details of these benefits and of the changes in them over the years would seem to be a valuable contribution to the body of facts upon which successful collective bargaining, arbitration of disputes, and wage administration must rely.

Situations To Be Studied. Each chronology will refer to a specific wage-determining arrangement that has remained in effect over a period of years. This arrangement may consist of a company and a union (e. g., the American Woolen Co. and the Textile Workers Union of America, CIO), a group of companies and a union (e. g., signatories to the National Bituminous Wage Agreement), a group of companies and a group of unions (e. g., Pacific Coast shipbuilding companies and the AFL Metal Trades Council), or simply the employing agency (e. g., Federal or State classified civil service).

The selection of the situations to be covered will be governed by some or all of the following criteria: (1) position of the company or association in its own industry, (2) number of workers involved, (3) availability of adequate records, (4) degree of operation offered by the parties immediately concerned, and (5) general public interest. Approximately 25 wage chronologies are now being prepared. Other situations of major national, regional, or local importance may also be studied in the future. Reports may be presented either as separate wage chronologies or as parts of industry-wide surveys of collective bargaining provisions and experience.

Identification. Each chronology will, of necessity, relate to a specific identified situation. Virtually all the information used in compiling the chronologies is, in one form or another, already a matter of public knowledge. Confidential data will not be used without authorization.

Periods To Be Covered. It will be possible in many instances to cover the entire life span of a wage determining arrangement. For some situations with long histories of successful collective bargaining, or for those into which collective bargaining does not enter, it will be necessary to begin at an appropriate prewar year, generally 1939. In such cases, the entire postwar period will be covered.

In consideration of the practical uses to which the wage chronologies can be put, it is important that they be kept current. The Bureau plans, therefore, to issue supplements when wages or related wage practices are changed.

Subjects To Be Included. (a) General wage changes: These are construed as upward or downward changes that affect an entire establishment, bargaining unit, or substantial group of workers at one time. Not included within the term are adjustments in individual rates (such as promotions, or merit or seniority increases) and minor adjustments in wage structure (such as changes in individual job rates or incentive rates) that do not have an immediate and noticeable effect on the general wage level of an establishment.

This concept of general wage change is similar to that used in the administration of wartime and postwar wage stabilization policy. Because of the omission of nongeneral changes, fluctuation in incentive earnings, and other factors, the sum of the wage changes listed in each chronology will not necessarily coincide with the movement of average hourly earnings over the same period.

(b) Minimum rates: Where minimum plant rates, common labor rates, or rates for specified

occupations are generally recognized as important elements in an industry's wage structure, an attempt will be made to show these rates in chronological sequence, parallel to the general wage changes.

(c) Related wage practices (fringe benefits): Broadly speaking, any practice that enhances workers' income or welfare or constitutes a significant item of labor expenditure to an employer can be considered in this category. The chronologies will generally include reference to such items as guaranteed minimum earnings, shift premium pay, daily and weekly overtime pay, week-end overtime pay, pay for holiday work, paid vacations, paid holidays, reporting time, waiting time, paid lunch periods, pay for travel time, and health and welfare benefits. Excluded, but nonetheless important, are contributions from employers required by law (social security, etc.).

The value of many of these items depends on the frequency of their use. It is beyond the scope of the chronology series to evaluate the total worth of fringe benefits. This is recognized as a serious deficiency, but it is one that cannot be corrected except by actual labor-cost analysis in each situation.

Wage Chronology No. 1

American Woolen Co., 1939-48¹

This chronology presents the major changes in wage rates and related wage practices put into effect by the American Woolen Co. since February 1, 1939, when the first written agreement between the company and the Textile Workers Union of America (CIO) became effective. Collective-bargaining relations between the company and the union (formerly the Textile Workers' Organizing Committee) had existed since the National Labor Relations Board certified the union as bargaining agent in two of the company's plants

in September 1937. Thus, the provisions of the agreement reported in this chronology under the date February 1, 1939, do not necessarily indicate changes in the conditions of employment existing prior to that time. The current agreement between the company and the union, effective February 1, 1948, covers approximately 21,000 workers in 21 mills in Maine, New Hampshire, Vermont, Massachusetts, Connecticut, Rhode Island, New York, New Jersey, and Kentucky. The contract remains in effect until February 1, 1950, with reopening of the wage issue permitted every 6 months during its life.

¹ Based on agreements with the Textile Workers Union of America (CIO) and directive orders of the National War Labor Board.

A—General Wage Changes¹

Effective date	Provision	Application, exceptions, or other related matters
Feb. 1, 1939	None	
Feb. 3, 1940	Increases ranged from 7 to 10 percent	Average increase approximately 5 cents an hour.
May 12, 1941	10 percent increase	Average increase approximately 6 cents an hour.
Aug. 18, 1941	7 cents an hour increase	
June 14, 1942	7.5 cents an hour increase for all workers earning less than 75 cents an hour; 5 cents an hour for all workers earning 75 cents an hour or more.	Average earnings of each job classification in each mill, rather than average earnings of each worker, was the determining factor in fixing amount of increase for each worker. 5 cents an hour increase for all workers at Bradford mill, Louisville, Ky., which was first brought under contract on Nov. 3, 1941.
Mar. 1, 1943		2.5 cents an hour increase for all workers at Bradford mill.
June 4, 1945		Wage brackets (peg points) formulated by the Regional War Labor Board brought varying increases to workers in the New England plants. 3.5 cents an hour increase at Bradford mill.
Dec. 17, 1945	15 cents an hour increase	All operating units.
Feb. 3, 1947	15 cents an hour increase	20 cents an hour increase at Bradford mill.
Feb. 2, 1948	15 cents an hour increase	All operating units.

B—Minimum Plant Wage Rates²

Feb. 1, 1930	No minimum wage provided by the agreement.	
May 12, 1941	40 cents an hour	44 cents an hour at Bradford mill, Louisville, Ky.
Aug. 18, 1941	47 cents an hour	49 cents an hour at Bradford mill.
Nov. 3, 1941		51.5 cents an hour at Bradford mill.
June 14, 1942	54.5 cents an hour	55 cents an hour at Bradford mill.
Mar. 1, 1943		70 cents an hour at Bradford mill.
June 4, 1945	60 cents an hour	All operating units.
Dec. 17, 1945	75 cents an hour	All operating units.
Feb. 3, 1947	90 cents an hour	
Feb. 2, 1948	\$1.05 an hour	

¹ General wage changes are construed as upward or downward adjustments affecting a substantial number of workers at one time. Not included within the term are adjustments in individual rates (promotions, merit increases, etc.) and minor adjustments in wage structure (such as changes in individual job rates or incentive rates) that do not have an immediate and noticeable effect on the average wage level.

The wage changes listed above were the major adjustments in the general wage level made during the period covered. Because of fluctuations in incentive earnings, changes in products, and employment practices, the omission of nongeneral changes in rates, and other factors, the sum of the general changes listed will not necessarily coincide with the amount of change in average hourly earnings over the same period.

² Does not apply to beginners, learners, or handicapped workers.

C—Related Wage Practices³*Guaranteed minimum job rates⁴*

Effective date	Provision	Application, exceptions, or other related matters
Feb. 1, 1939...	No provision for guaranteed minimum job rates.	
June 4, 1945...	Occupational minimum hourly rates were established. Workers were guaranteed these rates for all hours worked.	To determine if the minimum had been earned, workers' compensation was to include cost-of-living bonuses, payment for down-time, reporting time, and faulty materials, but not shift premium, overtime, vacation, or military pay. Guaranteed minimum earnings were to be on a weekly rather than a daily basis in cases where piece-rate or bonus earnings were computed at the end of a cycle; where compensation consisted of a share in a group or room bonus or was determined by application of a percentage to the earnings of other workers; or where a worker willfully distorted his daily average.
Dec. 17, 1945...	Guaranteed occupational minimum rates in effect on Dec. 16, 1945, were increased by 15 cents an hour.	For specified categories of piece or incentive workers, the previous guarantees were increased by only 12 cents.
Feb. 3, 1947...	Guaranteed occupational minimum rates in effect on Feb. 2, 1947, were increased by 15 cents an hour.	For the same categories of piece or incentive workers to which the above exceptions applied, the previous guarantees were increased by only 12 cents.
Feb. 2, 1948...	Guaranteed occupational minimum rates in effect on Jan. 31, 1948, were increased by 15 cents an hour.	Same action as above.

Shift Premium Pay

Feb. 1, 1939...	No provision for shift premium pay.	
May 30, 1943...	Second shift—no provision; third shift—7 cents an hour.	
Feb. 18, 1944...		Bradford mill: second shift—no provision; third shift—5 cents an hour.
Apr. 1, 1944...		Bradford mill: third shift—premium increased to 7 cents an hour.
Feb. 22, 1944...	Second shift—4 cents an hour.	All mills. In accordance with the March and April 1945 awards of the National War Labor Board, retroactive to Feb. 22, 1944.

Overtime Pay

Feb. 1, 1939...	Production workers to be paid time and one-half for work performed in excess of 8 hours per day or 40 hours per week.	Specified classifications of nonproduction employees to be paid time and one-half for all work performed in excess of 44 hours per week through Oct. 24, 1939, 42 hours per week from Oct. 25, 1939, through Oct. 24, 1940, and 40 hours per week thereafter. The above exceptions could be applied, through collective bargaining, to certain production departments during periods of emergency production, until Oct. 24, 1940. Exceptions provided for engineers, firemen, and watchmen.
Feb. 22, 1943...	All workers to be paid time and one-half for work performed in excess of 8 hours per day or 40 hours per week, Monday to Friday.	
Feb. 2, 1948...		Engineers, firemen, and watchmen included under provision for time and one-half pay after 40 hours per week, Monday to Friday.

³The last entry under each item is currently in effect.⁴Does not apply to beginners, trainees, learners, or handicapped workers, nor to the Bradford mill.

C—Related Wage Practices—Continued

Premium Pay for Saturday Work

Effective date	Provision	Application, exceptions, or other related matters
Feb. 1, 1939...	No provision for premium pay for Saturday work.	
Mar. 2, 1942 ⁵ ...	Time and one-half for work performed on Saturday.	Exceptions provided for engineers, firemen, watchmen, and employees whose scheduled shifts required work on Saturday to complete a 40-hour week, or employees who voluntarily took time off during the week and sought to make it up on Saturday.
Feb. 22, 1943 ⁵ ...		Exceptions also provided for employees who were absent from work earlier in the week for nonspecified personal reasons, or who completed their regular scheduled third-shift work week of 40 hours or less prior to 8 a. m. on Saturday, or who were newly hired after the beginning of the week. General provision extended to engineers, firemen, and watchmen.
Feb. 1, 1946...		

Premium Pay for Sunday Work

Effective date	Provision	Application, exceptions, or other related matters
Feb. 1, 1939...	Time and one-half for work performed on Sunday.	An exception was provided for employees whose regular duties call for work on Sundays.
Feb. 22, 1943 ⁵ ...		General provision extended to all workers except engineers, firemen, and watchmen.
Feb. 1, 1946...	Double time for work performed on Sunday.	Applicable to all workers.

Holiday Pay

Effective date	Provision	Application, exceptions, or other related matters
Feb. 1, 1939...	Time and one-half for work performed on 7 specified holidays. No pay for holidays not worked.	Except in cases of employees whose regular duties called for work on holidays. Holidays specified were: New Year's Day, Memorial Day, Fourth of July, Labor Day, Armistice Day, Thanksgiving Day, and Christmas Day.
Mar. 6, 1941 ⁵ ...	Another holiday added.	Columbus Day.
Feb. 22, 1943 ⁵ ...		General provision extended to all workers except engineers, firemen, and watchmen.
Feb. 2, 1948...	Six paid holidays established for which all workers were to be paid their regular rate of pay. Work on a paid holiday to be paid for at time and one-half in addition to regular holiday pay.	New Year's Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day, and Christmas Day. Work performed on Columbus Day and Armistice Day to be paid for at time and one-half.

Paid Vacations

Effective date	Provision	Application, exceptions, or other related matters
Feb. 1, 1939...	No provision for paid vacations.	Vacations were provided for employees working 900 hours or more during preceding 12-month period. Vacation pay to equal 40 times average hourly earnings, overtime excluded, during a specified period. Employees who did not qualify under the above provision but who had been in the company employ for 6 months or more were to be paid 2 percent of total earnings during the preceding 12 month period.
Mar. 2, 1942...	Employees with 1 year or more of service—1 week, 40 hours' pay.	Overtime excluded from earnings in computing 2 percent vacation pay for workers with 6 or more months of service who did not qualify for full vacations.
Feb. 22, 1943...		

⁵ During the period covered by Executive Order No. 9240 (Oct. 1, 1942, to Aug. 21, 1945), this provision was modified in practice to conform to that order.

C—Related Wage Practices—Continued

Paid Vacations—Continued

Effective date	Provision	Application, exceptions, or other related matters
Feb. 22, 1944-- July 10, 1945--	Added: Employees with 5 years or more of service—2 weeks, 80 hours' pay.	In accordance with National War Labor Board awards of March and April 1945, retroactive to Feb. 22, 1944. The computation of vacation pay and the prerequisites indicated above continued in effect, except that employees with 5 years or more of service who did not qualify for full vacation pay were to be paid 4 percent of total earnings during preceding 12-month period, overtime excluded. Same prerequisites as above. For employees who did not qualify, vacation payments were to be as follows: 6 months to 3 years' service—2 percent of total earnings for 12-month period, overtime excluded; 3 to 5 years' service—3 percent; 5 years' or more of service—4 percent.
Feb. 2, 1948--	Increased vacation pay for employees with more than 3 and less than 5 years' service. Thus: 1 year but less than 3 years' service—1 week, 40 hours' pay; 3 years' but less than 5 years' service—1 week, 60 hours' pay; 5 years or more of service—2 weeks, 80 hours' pay.	

Reporting Time

Feb. 1, 1939--	No provision for payment of reporting time.	
Mar. 2, 1942--	All employees reporting for work but for whom no work was provided to be paid for a minimum of 2 hours at their regular hourly rate or average hourly earnings during a specified period.	The employer reserved the right to supply other work which was paid for at the employee's regular rate or the rate of the job to which assigned, whichever was higher.
Feb. 22, 1943--	Minimum reporting time increased to 4 hours.	Except in cases of major power break-down, for which payment was to be for a minimum of 2 hours.

Down Time

Feb. 1, 1939-- Sept. 5, 1944--	No provision for payment of down time. Pieceworkers to be paid for loss of time due to break-down of machinery, power failure, waiting for materials, changing of warp, or loom stoppages for dropping of wires. Payment also to be made for changing of bands on spinning machines (mules), according to a specified schedule instead of down-time method.	The down-time provisions established specified waiting periods, varying by type of machine, for which no down-time payment was to be made. Amounts paid were also specified and, in addition, provision was made whereby the employer could minimize or eliminate down time by ordering a worker to operate other machines or fewer machines, by assigning other work, or by sending the worker home.
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Faulty Material

Feb. 1, 1939-- July 10, 1945--	No provision for loss in earnings due to faulty materials. Piece or incentive workers to be paid for loss in earnings because of faulty material.	Payment for lost time was to be made on the basis of the worker's average hourly earnings, exclusive of cost-of-living bonus and overtime.
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Equal Pay for Women

Feb. 1, 1939-- Feb. 22, 1943--	No provision. Women were to receive the same rates of pay as men when performing the same work.	
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C—Related Wage Practices—Continued

Health and Welfare Benefits

Effective date	Provision	Application, exceptions, or other related matters
Feb. 1, 1939...	No provision for health and welfare benefits.	
Oct. 1, 1945...	The company provided the following group insurance: <i>Weekly accident and sickness benefits:</i> Weekly benefits in case of disability due to accident or sickness (not covered by workmen's compensation law) to amount to 50 percent of average weekly earnings, including overtime. Minimum payments \$12.00 per week for 26 weeks, beginning with first day of disability due to accident and eighth day of disability due to sickness. <i>Hospital expense benefits:</i> Every employee was enrolled as a member of the semiprivate plan of the Blue Cross plan. <i>Medical expense benefits:</i> Beginning with first attendance in case of accident and fourth visit in case of sickness, \$3 is paid for each doctor's visit at home or hospital and \$2 for each visit at other than home or hospital. <i>Surgical benefits:</i> Surgical benefits up to \$150 were to be paid according to specified schedule. <i>Maternity benefits:</i> Weekly sickness benefits for 6 weeks and obstetrical benefits as set forth in the schedule of operations. <i>Accidental death or dismemberment:</i> In addition to above benefits, the following payments were provided for accidental death or dismemberment resulting from injury occurring on or off the job: For loss of life, loss of both eyes, both hands, both feet, or 1 hand and 1 foot—60 times weekly accident benefits; for loss of 1 hand, 1 foot, or 1 eye—30 times weekly accident benefits. <i>Hospital expense benefit:</i> John Hancock Life Insurance Co. hospital expense benefit program substituted for Blue Cross plan. Plan provides payment of \$6 per day up to \$186 a year.	In Rhode Island and other States where employees were required to contribute to a sickness or health plan, benefits were to be paid only to the extent of the difference between company and State benefits. Employees in these States were covered by a \$1,000 life insurance policy.
June 1, 1947...		Limited to 3 attendances a week and 50 attendances as a result of any one disability. These benefits were not to apply in cases of dental work or treatment, eye examination or fitting of glasses, X-rays, drugs, dressings, medicines, pregnancy, childbirth, or miscarriage.
Feb. 2, 1948...	Minimum weekly accident and sickness benefit payments were increased by \$3, making the new minimum weekly payment \$15 instead of \$12. Maximum period for which weekly accident and sickness benefit payments might be paid was reduced from 26 to 13 weeks. A \$500 life insurance policy was issued to all workers, including those previously covered by life insurance policies.	

Child Labor Trends in an Expanding Labor Market

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IN SEPTEMBER 1948, YOUNG WORKERS 14 through 17 years of age numbered about 2½ million; more than twice as many were employed as in 1940. During the war and since, they have made up a large proportion of the excess in the labor force over what would have been expected if peacetime trends had continued after 1940. With the pressures on the labor market caused by the expanding defense program, abnormal numbers of minors are likely to continue in the labor force.

Although young persons under 18 are a comparatively small proportion of the labor force in the United States, their importance is out of all proportion to their numbers, because they are still minors, for whom the public has assumed a responsibility for training and for protection not accorded to adults.

The year 1948 completes the first decade of successful Federal control of youth employment in interstate industries through the child-labor provisions of the Fair Labor Standards Act.²

¹ Of the Child Labor Branch of the Wage and Hour and Public Contracts Divisions, U. S. Department of Labor.

² The child-labor provisions of the Fair Labor Standards Act of 1938 apply to establishments producing goods shipped or delivered for shipment in interstate commerce. They do not apply to interstate industries that do not produce goods. A minimum age of 16 is established for work in manufacturing and mining occupations at any time and for all work during school hours; employment of 14- and 15-year-old children in certain limited nonmanufacturing and nonmining occupations is permitted outside school hours under regulations which restrict hours of labor and prohibit night work; a minimum age of 18 is established for occupations declared especially hazardous by the Secretary of Labor. Exempt from these provisions are children under 16 employed by their parents in nonmanufacturing and nonmining occupations, children employed as actors in motion pictures or theatrical productions, and children employed in agriculture during periods when they are not legally required to attend school.

During this decade, industry completed its recovery from general depression and unemployment, progressed through the dislocations and adjustments of the defense period into peak wartime production, and finally reached a peacetime plateau of high level employment in a period of rising inflation and defense expenditures. Large-scale harm to young people was avoided, owing to protective Federal and State child-labor and education laws.

Facts gathered by several Federal agencies have been drawn upon,³ checked against each other, and combined to show the effects of these changes on teen-age youth in school and in the labor market. The material indicates the extent to which young people under the age of 18 years exchange school for work or combine schooling and employment, and the kinds of jobs they find.

Young People in the Labor Force

The United States labor force of over 60 million persons includes more than 2 million young persons 14 through 17 years of age actually employed: The April 1948 total was estimated by the Bureau of the Census at 2,040,000. This number was considerably below the wartime peak, but still double the prewar figure of 1,060,000 based on the decennial census of March 1940⁴ (chart 1). The percentage of young persons employed, full time and part time, increased even more than the number, because of the population decline in these age groups (reflecting the lowered birth rates during the depression years).

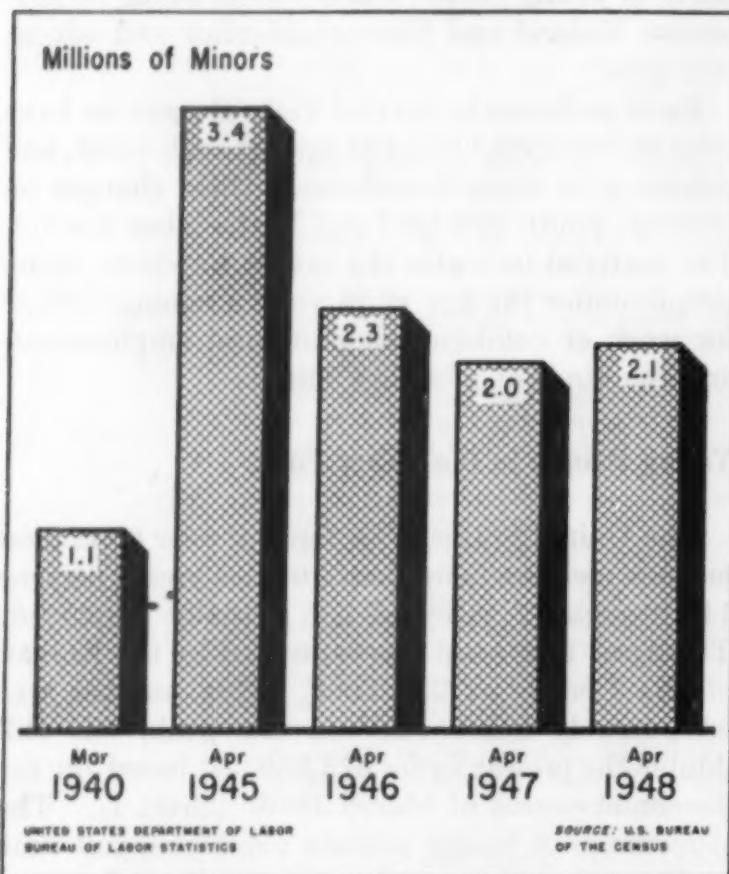
Seasonal jobs raised the total by some 1½ million during the summer of 1948. By September, when schools were opening, young workers numbered

³ Basic figures on young workers in the labor force are from the U. S. Bureau of the Census and include figures from the decennial census of March 1940 and from the monthly reports on the labor force available from 1945 on; special figures on school enrollment and employment status of minors 14 through 17 years of age obtained by the Bureau of the Census for October 1947 and in previous years are also used. Supporting data, giving detail on industry and on type of employment (regular full-time or vacation and outside-school-hours), are from reports of State employment or age certificates issued for minors 14 through 17 years of age by States and cities reporting to the Child Labor Branch of the Wage and Hour and Public Contracts Divisions of the U. S. Department of Labor; industrial injury statistics are from a Department of Labor survey; data on illegal employment are from reports on child-labor inspections made under the Fair Labor Standards Act. The Social Security Administration of the Federal Security Agency supplied figures on minors applying for social security account numbers.

⁴ The published 1940 census figure was adjusted chiefly for differences in interview techniques by the Bureau of the Census to make it comparable with data obtained through its Monthly Labor Force surveys.

2,400,000, which was above the total for the preceding April but about the same as that for September 1947. These census totals do not include workers under 14 years of age; other sources indicate that their numbers are considerable.

Chart 1.—Children at Work, 14-17 Years of Age



Young workers engage in a wide variety of occupations. In this group, the younger ones are stock-room workers in stores, bus boys and helpers in restaurants, bell boys and kitchen workers in hotels, general house workers and nurse girls in private domestic service; a small proportion are in manufacturing. More of the 16- and 17-year-old minors than of those aged 14 and 15 years work in manufacturing and trade and proportionately fewer in domestic service in homes. About a fourth of those 16 and 17 years old and two-fifths of those 14 and 15 years old, it is estimated, work in agriculture; the proportions vary according to season.

The trend of employment of minors 14 through 17 years of age in agricultural and nonagricultural occupations, by months, from the earliest date available, that is July 1945, through September 1948 is shown in chart 2.

Young Applicants for Social Security Numbers

Applications for social security account numbers by persons under 18 years of age under the Social Security Act, like the census totals, show a sharp increase in youth employment during wartime, gradual fall afterwards, and a leveling off about 1947 at a point well above the prewar level. The number of applicants rose from less than a million in 1940 to nearly 3 million in 1943 and then declined gradually to a point about 30.5 percent above the 1940 figure.

Social security account numbers are not issued to all persons shown in the United States Census labor force. They are not given to workers in agriculture or domestic service, in which large numbers of young people are employed. Moreover, only persons entering employment in covered occupations for the first time need apply for account numbers, and persons without jobs may obtain account numbers. On the other hand these figures cover many children under 14 years of age, who are not included in the Census estimates. On the whole, the social security data are a better indication of year-to-year trends in youth employment than of the full extent of such employment.

Volume of Employment Certificates

The volume of employment and age certificates issued for young persons 14 through 17 years of age going to work reflected the same trends as the Census and Social Security data. Certificate reports are received monthly by the U. S. Department of Labor under cooperative arrangements with local and State issuing and supervising officials. Although the number of certificates issued for full-time or part-time employment in 1947 had dropped from the wartime peak, it was far higher than the number issued in 1940. During 1948, the postwar decline in numbers of certificates issued was halted: the first 6 months of 1948 show only a 6-percent drop from the first 6 months of 1947, and incomplete reports for later months show a slight increase in 1948 over comparable months in 1947.

These figures do not indicate the minimum number of young people actually at work at any given time, but show the number going to work. They underestimate the movement, because certificate laws in many States still fall far short of

covering the entire field of youth employment, and because many children go to work without obtaining the certificates required by law. For young workers 16 and 17 years of age, also, about half of the States do not legally require certificates for any employment, although administratively they are issued on request and are accepted as proof of age under the Fair Labor Standards Act.

Another cause of understatement is that certificates do not cover boys and girls below the legal age for employment set by State or Federal child-labor laws. Nevertheless, the figures do show the minimum extent of the flow of young persons 14 through 17 years of age into the United States labor market, and provide information on a State as well as a national basis.

TABLE 1.—Number of first regular employment certificates issued for minors 14–15 and 16–17 years of age, 1940, and 1943–47, with percent change, 1940–47

[Figures in italics indicate that vacation and outside school hours certificates are included with regular certificates]

State or city	Number of certificates issued, by age groups											
	14 and 15 years						16 and 17 years ¹					Percent change, 1940–47
	1940	1943	1944	1945	1946	1947	1940	1943	1944	1945	1946	
Alabama ¹	124	955	1,529	908	363	324	1,625	19,855	22,718	18,020	5,436	¹ 3,692 (4)
Birmingham ²	57	512	677	238	125	94	178	1,849	4,679	697	4,626	(4)
Arizona	116	182	84	76	165		398	398	475	357	167	(4)
Arkansas	3	208	207	140	39	40	89	1,142	1,534	1,379	782	573 +543.8
California	419						5,853					(4)
Los Angeles	128						2,241					(4)
San Diego	11						312					(4)
San Francisco	1						664					(4)
Colorado	51	334	407	495	331	295	233	2,467	4,304	4,868	2,709	1,631 +600.6
Denver	41	208	208	240	178	195	214	1,804	3,288	3,361	1,684	729 +240.7
Connecticut	236	377	286	171	145	83	7,202	34,203	25,577	20,194	20,190	17,272 +139.8
Delaware	36	105	93	77	79	57	715	4,171	3,303	2,206	1,718	1,777 +148.5
Wilmington	35	80	42	32	31	16	237	2,801	2,152	1,166	984	911 +284.4
District of Columbia	28	433	518	341	199	94	2,371	10,050	9,003	8,219	6,377	4,273 +80.2
Florida	7	490	513	301	278	252	222	11,359	12,906	9,725	5,635	5,018 (4)
Georgia ³	0	478	846	618	1,261	0	1,989	24,241	20,694	17,227	11,554	8,939 (4)
Atlanta ²	0	172	519	404	359	0	126	2,290	4,156	3,362	2,317	2,044 (4)
Hawaii ²	128	295	191	172	103	63	4,349	6,218	4,677	4,812	4,382	3,648 (4)
Idaho	0	0	0	0	0	0	22	974	920	938	608	440 (4)
Illinois	32	852			3,555	606	3,853	48,643			35,741	37,471 (4)
Indiana	28	0	0	0	0	0	4,615	68,129	58,028	42,560	25,005	22,687 +391.6
Fort Wayne	0	0	0	0	0	0	281	3,434	2,822	1,303	1,162	1,436 +411.0
Indianapolis	14	0	0	0	0	0	1,050	11,401	7,293	5,969	3,268	3,339 +218.0
South Bend	0	0	0	0	0	0	76	2,205	1,982	1,036	687	735 +867.1
Iowa	1,639	5,245	5,719	2,657	1,634	1,596	363	4,681	10,533	9,962	2,957	3,158 +770.0
Kansas	8	685	1,141	824	417	225	33	7,438	10,151	5,940	1,235	951 (4)
Wichita	0	253	306	194	80	49	17	2,682	3,684	1,118	200	215 (4)
Kentucky	157	783	851	548	402	344	533	3,273	3,188	2,983	1,944	1,578 (4)
Louisville	124	478	426	319	217	206	414	1,791	1,938	2,099	1,231	948 (4)
Louisiana ²	0	0	0	0	0	0	11,745	12,240	10,011	4,855	5,530	(4)
New Orleans ²	193	0	0	0	0	0	3,439	7,718	7,111	5,882	3,193	3,240 (4)
Maine ⁷	1	141	152	95	89	57	878	8,577	6,208	4,905	3,705	3,640 +303.2
Maryland	371	2,880	2,697	2,118	1,583	1,264	4,516	23,932	18,552	15,540	9,264	7,962 +76.3
Baltimore	339	2,648	2,456	1,934	1,419	1,095	3,527	19,944	14,669	11,715	7,388	5,467 +55.0
Massachusetts	581	3,090	2,577	1,681	1,405	915	3,024	10,247	7,470	5,598	6,036	5,160 +70.6
Boston	36	650	693	527	470	361	315	488	370	354	319	253 +87.4
Brockton	7	22	41	7	2	3	572			332	490	527 -7.9
Cambridge	11		83	75	65	44	572			243	227	211 -7.5
Fall River	7	9	14	8	17	8	1,178	1,232	1,092	1,052	1,092	934 -20.7
Holyoke	5	1	0	0	0	0	228	542	290	243	227	211 -7.5
Lawrence	29	191	157	151	117	88	313	1,058	693	876	812	654 +108.9
Lowell	12	80	90	42	64	42	517	1,903	1,556	1,353	1,658	1,443 +179.1
Lynn	8	149	138	94	50	18	226	786	557	616	555	508 +124.8
Malden	8	59	57	28	21	14	329	1,593	1,408	1,212	1,285	401 (4)
Medford	3	18	12	2	1	1	139	1,219	404	358	350	271 +95.0
New Bedford	87	136	115	100	110	58	718	877	651	628	1,001	525 -26.9
Newton	2	28	23	28	12	11	113	529	344	275	252	181 +60.2
Quincy	9	52	35	22	18	14	434	1,264	809	638	1,137	250 (4)
Somerville	7	128	81	22	24	21	387	2,322	1,592	1,145	1,042	562 +45.2
Springfield	25	365	233	131	86	26	360	806	672	609	1,456	1,242 +245.0
Worcester	15	108	111	85	13	12	1,491	3,682	2,767	2,308	2,281	1,864 +25.0
Michigan ⁷	514	3,975	3,166	2,074	1,443	1,548	5,328	78,375	63,544	43,293	33,439	31,228 (4)
Detroit ⁷	132	911	315	179	79	52	2,071	52,751	25,993	10,238	14,621	13,599 (4)
Grand Rapids ⁷	19	98	74	51	46	38	656	3,153	1,742	1,226	1,244	1,284 (4)
Minnesota	109	702	811	1,112	583	595	544	9,421	12,846	12,533	6,711	6,313 +1,735.2
Mississippi							264	2,480	3,191	1,953	913	692 +162.1
Missouri	51	1,119	858	787	581	445	651	25,515	25,810	19,605	12,003	8,878 +1,217.7
Kansas City	4	208	64	50	39	51	70	6,584	6,543	5,964	2,350	1,445 +1,964.3
St. Louis	32	478	360	400	361	279	304	12,543	10,428	7,695	4,537	3,929 +1,192.4
Montana	0	0	0	0	0	0	0	1,663	1,446	823	363	(4)

See footnotes at end of table.

TABLE 1.—Number of first regular employment certificates issued for minors 14–15 and 16–17 years of age, 1940, and 1943–47 with percent change, 1940–47—Continued

State or city	Number of certificates issued, by age groups												
	14 and 15 years						16 and 17 years ¹						
	1940	1943	1944	1945	1946	1947	1940	1943	1944	1945	1946	1947	Percent change, 1940–47
Nebraska.....	117	9,280	3,302	2,655	1,397	1,841	11	4,298	5,565	4,832	1,360	1,365	(0)
Omaha.....	81	1,159	1,642	1,283	762	590	2	3,916	4,784	3,978	1,037	895	(0)
Nevada.....	18	18	43	13	25	25	58	138	155	179	79	79	(0)
New Hampshire.....	118	877	909	628	480	309	1,180	6,001	4,855	5,826	3,318	2,655	+123
New Jersey ²	1,360	0	0	0	0	0	6,473	42,625	28,610	20,144	17,374	15,435	+123
Newark ³	147	0	0	0	0	0	960	0	0	0	0	0	(0)
New Mexico.....	6	77	122	36	57	90	6	76	145	125	57	95	(0)
New York.....	33	134	109	83	57	55	36,837	167,525	154,982	126,933	94,633	81,401	+121
Albany.....	0	1	1	0	0	0	370	1,113	970	1,119	727	690	+16
Binghamton.....	0	0	0	0	0	0	119	904	663	453	346	315	+164
Buffalo.....	0	0	1	1	2	0	1,070	8,620	6,681	4,941	4,078	3,608	+83
Mt. Vernon.....	0	1	2	0	1	0	128	625	664	531	438	406	+21
New Rochelle.....	1	0	3	0	0	2	59	372	515	431	322	265	+34
New York.....	12	38	32	7	8	1	24,884	84,912	80,051	67,878	44,537	36,665	+47
Niagara Falls.....	0	0	0	1	0	0	110	3,027	2,109	1,473	792	724	+58
Rochester.....	0	0	0	0	0	0	865	8,377	10,604	7,424	6,203	4,671	+44
Schenectady.....	0	0	4	1	2	0	238	1,400	904	1,041	538	607	+155
Syracuse.....	0	0	0	0	0	0	746	4,048	3,495	2,482	2,534	2,437	+26
Troy.....	0	0	0	0	1	1	212	1,167	870	863	709	544	+156
Utica.....	0	0	0	0	0	0	276	1,708	1,340	1,031	831	896	+213
Yonkers.....	0	0	1	1	0	0	689	1,840	1,759	1,276	1,005	922	+33
North Carolina.....	0	0	0	0	0	0	6,028	27,909	26,855	24,918	13,825	9,609	+59
Charlotte.....	0	0	0	0	0	0	213	842	849	767	323	287	+34
North Dakota.....	1	11	18	16	33	63	0	0	0	0	0	0	(0)
Ohio.....	16	267	273	209	112	57	167	2,668	3,191	3,081	1,277	936	(0)
Cincinnati.....	1	42	55	37	35	5	62	408	892	1,201	567	311	+40
Oklahoma City.....	36	154	140	100	54	32	169	1,096	1,053	884	132	185	+4
Oregon.....	4	613	825	242	11	10	405	14,940	9,853	4,863	1,829	1,675	+313
Portland.....	0	498	452	186	5	6	241	11,061	6,376	3,418	1,185	1,102	+371
Pennsylvania.....	9,841	9,488	7,339	0	6,597	6,042	12,197	109,177	95,702	73,190	51,522	44,302	+233
Altoona.....	0	0	0	0	0	0	85	1,113	984	624	394	236	+177
Bethlehem.....	5	27	17	5	24	17	246	702	507	313	323	335	+36
Chester.....	27	46	29	20	15	7	285	1,736	928	813	318	223	+21
Erie.....	2	32	25	35	29	23	104	2,091	1,754	1,515	530	570	+46
Harrisburg.....	0	4	0	0	0	0	148	801	746	515	318	285	+92
Johnstown.....	15	53	25	21	17	12	79	563	366	320	202	174	+120
Lancaster.....	16	65	32	12	3	7	186	779	514	446	431	389	+109
McKeesport.....	8	24	49	24	18	18	76	883	750	454	254	231	+23
Philadelphia.....	322	601	388	336	317	326	6,170	26,455	27,126	19,193	12,933	11,653	+88
Pittsburgh.....	49	123	132	167	132	162	953	7,412	5,336	3,931	3,246	3,168	+232
Reading.....	0	0	0	0	0	0	414	1,319	945	802	797	813	+96
Scranton.....	36	30	26	16	25	12	296	2,529	1,843	1,413	1,113	770	+160
Wilkes-Barre.....	30	51	32	28	31	21	174	725	520	317	321	221	+27
York.....	79	136	102	73	68	49	147	778	543	459	348	306	+108
Puerto Rico ²	0	0	0	0	0	0	0	1,022	1,309	1,437	1,126	1,564	(0)
Rhode Island.....	0	0	0	0	0	0	1,524	10,115	7,327	5,160	5,241	4,761	+212
Providence.....	0	0	0	0	0	0	740	4,217	2,470	1,312	1,213	1,066	+44
South Carolina.....	0	0	0	0	0	0	1,768	10,016	9,225	8,456	6,905	5,685	+221
Tennessee.....	67	848	805	498	333	213	311	10,435	14,434	9,702	4,447	2,768	+790
Knoxville.....	37	238	207	113	67	54	29	906	718	515	227	213	(0)
Nashville.....	4	48	13	1	0	0	120	1,160	968	795	483	253	+110
Texas.....	44	212	60	66	37	24	399	15,640	15,857	13,702	4,972	2,815	+605
Utah.....	0	41	9	27	6	10	63	1,131	872	1,164	629	441	+600
Vermont.....	0	38	2	0	0	0	281	2,594	2,709	2,289	1,784	1,124	+300
Virginia.....	561	819	493	222	137	107	1,361	8,831	9,355	9,767	6,286	4,728	(0)
Richmond.....	90	382	208	97	73	55	86	709	1,125	1,845	1,028	513	(0)
Washington ⁴	3,214	6,328	7,215	152	122	10	28,096	29,386	26,717	3,808	805	(0)	
Seattle ⁵	916	2,750	2,983	17	10	10	10,248	11,940	10,104	1,033	388	(0)	
West Virginia.....	14	39	96	57	58	40	141	6,798	11,857	15,826	4,960	5,629	+2,473
Wisconsin.....	1	30	56	14	50	2	3,358	27,965	25,117	22,421	16,765	16,879	+402
Milwaukee.....	0	0	0	0	0	0	1,057	4	458	577	781	7,723	+630
Wyoming.....	0	0	0	0	0	0	0	4	458	577	156	140	(0)

¹ This table includes all States reporting and selected cities with 50,000 or more population (1940 census) reporting 50 or more certificates in 1940, 1943, 1944, 1945, 1946, or 1947.

² 16 year minimum age law went into effect in Hawaii in January 1940, in New Jersey in September 1940, in Florida in July 1941, in Louisiana in July 1942, in Puerto Rico in August 1942, in Georgia in July 1946, in Illinois in June 1947, and in Alabama in October 1947.

³ Employment or age certificates were required for minors 16 and 17 years of age during at least part of this year. Previously they were required only for minors under 16 years of age and were issued only on request to minors 16 and 17. This change in the law became effective in New Jersey in 1940, in Florida and Hawaii in 1941, in Louisiana and Puerto Rico in 1942, in Georgia in 1946, in Alabama and Illinois in 1947, and would naturally result in an increase in the number of certificates.

⁴ Percent not shown when number of minors was less than 50 in 1940, when figures were not available or not comparable.

⁵ Data not complete.

⁶ After the attack on Pearl Harbor, the schools did not reopen until February 20, 1942, and for some months thereafter school attendance in case of employed children was not enforced. Therefore many children under 16 who would otherwise have stayed in school went to work.

⁷ In Maine and Michigan 15 years is the minimum age for issuance of regular certificates.

⁸ Beginning in December 1941 in Detroit and in January 1945 in Grand Rapids regular certificates include vacation and outside-school-hours certificates.

⁹ Includes reissued certificates.

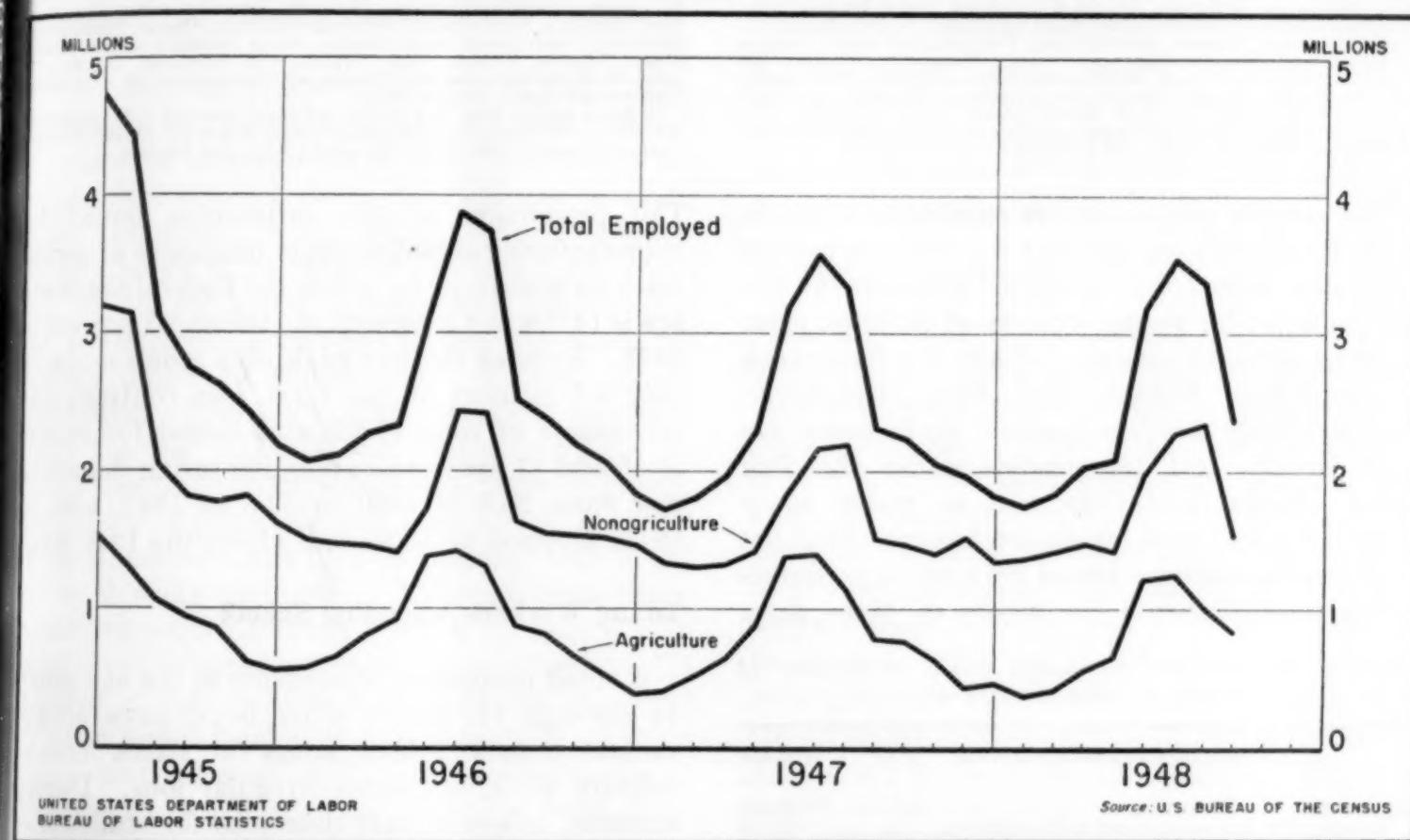
The rise to the war peak, the postwar drop, and levelling off to totals in 1947 generally far above those of 1940, are shown in table 1, which gives the number of certificates issued for the age groups 14 and 15, and 16 and 17, in 1940 and in each year from 1943 through 1947, in each of the States and cities reporting.⁶

⁶ The figures given are for first regular certificates, that is, those which permit children to leave school and go to work, as these are of special interest to the school officials who issue certificates and who are also concerned to keep children under 18 in school at least through high school. In a few States for children of 14 and 15, and in a larger number of States for minors of 16 and 17, a regular certificate is issued whether the minor leaves school for employment or continues to attend school. For this reason, these figures, particularly for the 16- and 17-year-old group, include some minors who do not leave school for work.

In the comparable areas for which reports were received, the number of minors 14 through 17 years of age obtaining certificates for their first jobs in full-time or part-time work was 167,358 in 1940 and 539,767 in 1947,⁷ with a peak in 1944 of 1,137,594—580 percent above the 1940 total. On this basis, it appears that roughly three times as many young persons of these ages went to work with employment or age certificates in 1947 as in

⁷ The actual number of certificates issued in 1947 (table 3, p. 594) is larger than the total shown in table 2. Excluded from this table are States and cities that did not report for every year 1940-47, and also six States (Alabama, Florida, Georgia, Illinois, Louisiana, and New Jersey) and two Territories (Hawaii and Puerto Rico) where the minimum age for employment was raised to 16 years during the period.

Chart 2.—Employed Minors, 14-17 Years of Age, July 1945—September 1948



1940. The percentage increase was greater for those 14 and 15 years old than for those 16 and 17, in spite of advances in minimum age standards of some State laws (table 2).

For the year 1947, in the entire area covered, the number of young persons 14 through 17 years of age reported as obtaining certificates for work, either in full-time or in part-time jobs, was 763,270—of these, 161,860 were 14 and 15 years

old and 601,410 were 16 and 17 years of age. Re-issued regular certificates (that is, certificates issued when a child working full time goes from one job to another) raised the total for the localities reporting to nearly a million (939,811).⁸ Employment certificates issued in 1947, by type of certificate and age group, are shown in table 3.

⁸ This report of certificates issued for work during vacation and outside school hours includes both first and subsequent jobs.

TABLE 2.—Minors 14 through 17 years of age receiving employment and age certificates for full-time or part-time work, 1940 and 1943-47

Age of minor and type of certificate ¹	1940	1943	1944	1945	1946	1947	Percent change, 1940 to 1947
14 through 17 years.	167,358	1,136,474	1,137,594	902,879	656,002	539,767	+76.2
Regular certificates	108,706	701,038	645,208	513,852	346,526	295,001	+171.6
Vacation and outside-school-hours certificates	58,652	435,436	492,386	479,027	309,476	244,766	+317.2
14 and 15 years.	33,855	271,965	314,247	304,974	150,966	115,029	+23.6
Regular certificates ²	4,539	24,188	24,367	18,027	11,841	10,073	+121.0
Vacation and outside-school-hours certificates ³	29,316	247,777	289,880	286,947	139,125	104,956	+258.0
16 and 17 years.	133,503	864,509	823,347	687,905	505,036	424,738	+218.1
Regular certificates ⁴	104,167	676,850	620,841	495,825	334,685	284,928	+171.0
Vacation and outside-school-hours certificates ⁵	29,336	187,659	202,506	192,080	170,351	139,810	+378.6

¹ A "regular certificate" is a certificate permitting a minor to leave school and go to work. A "vacation and outside-school-hours certificate" is one permitting a minor to work only during vacation and outside school hours during the school term. In a few States for children 14 and 15, and in a larger number of States for minors 16 and 17, a regular certificate is issued whether the minor leaves school for employment or continues to attend school. For this reason, figures for minors receiving regular certificates, particularly for the 16- and 17-year-old group, include some minors who do not leave school for work.

² 31 States, District of Columbia, and 31 cities in 3 States: Arkansas, Colorado, Connecticut, Delaware, District of Columbia, Idaho, Indiana, Iowa (includes vacation and outside-school-hours certificates), Kansas, Kentucky, Maine, Maryland, Massachusetts (15 cities), Michigan, Minnesota (includes vacation and outside-school-hours certificates), Mississippi, Missouri, Nebraska (includes vacation and outside-school-hours certificates), New Hampshire, New York, North Carolina, North Dakota, Oklahoma (2 cities), Oregon, Pennsylvania (14 cities), Rhode Island, South Carolina, Tennessee, Texas, Utah, Vermont, Virginia, West Virginia, and Wyoming.

The varying proportions of employment certificates issued that are granted for work in specific industries reflect the changing demands of the labor market for young workers of different ages, as these demands operate within the framework of restrictive Federal and State legislation. Comparatively few occupations in factories are legal for 14- and 15-year-olds under the Fair Labor Standards Act as well as under many State laws, and such legislation has restricted the number of certificates issued for work in manufacturing establishments to minors of these ages.

TABLE 3.—Employment certificates issued to minors 14 through 17 years of age, 1947¹

Type of certificate and age of minor	Number
Total: 14 through 17 years of age.	939,811
Regular (first) and vacation and OSH certificates.	763,270
Regular.	431,072
Vacation and OSH certificates.	332,198
Reissued ² regular certificates.	176,541
14 and 15 years of age.	164,075
Regular (first) and vacation and OSH certificates.	161,860
Regular.	10,015
Vacation and OSH certificates.	151,845
Reissued regular certificates.	2,215
16 and 17 years of age.	775,736
Regular (first) and vacation and OSH certificates.	601,410
Regular.	421,057
Vacation and OSH certificates.	180,353
Reissued regular certificates.	174,326

¹ 40 States and 30 cities in 2 other States, District of Columbia, Hawaii, and Puerto Rico. States omitted: Arizona, California, Nevada, New Mexico, Ohio, and Washington.

² Does not include 24,321 "reissued child labor permits" reported from Wisconsin. These reissued certificates, although issued to minors 14 through 17, are not reported by age group or type of certificate.

³ 26 States, District of Columbia, and 31 cities in 3 States: Arkansas, Colorado, Delaware, District of Columbia, Idaho, Indiana, Kansas, Kentucky, Maine, Maryland, Massachusetts (15 cities), Michigan, Mississippi, Missouri, New Hampshire, New York, North Carolina, North Dakota, Oklahoma (2 cities), Oregon, Pennsylvania (14 cities), Rhode Island, South Carolina, Tennessee, Texas, Utah, Vermont, Virginia, West Virginia, and Wyoming.

⁴ 31 States, District of Columbia, and 31 cities in 3 States: Arkansas, Colorado, Connecticut, Delaware, District of Columbia, Idaho, Indiana, Iowa, Kansas, Kentucky, Maine, Maryland, Massachusetts (15 cities), Michigan, Minnesota, Mississippi, Missouri, Nebraska, New Hampshire, New York, North Carolina, North Dakota, Oklahoma (2 cities), Oregon, Pennsylvania (14 cities), Rhode Island, South Carolina, Tennessee, Texas, Utah, Vermont, Virginia, West Virginia, and Wyoming. (In many of these States regular certificates include certificates issued for work during vacation and outside school hours.)

⁵ 9 States and 28 cities in 3 States: Arkansas, Kentucky, Massachusetts (15 cities), New York, North Carolina, Oklahoma (2 cities), Oregon, Pennsylvania (14 cities), Rhode Island, Tennessee, Utah, and Virginia.

The proportion of the certificates issued for manufacturing establishments (exclusive of certificates for newsboys, for whom the Federal minimum age is 14⁶) was 1.3 percent in 1940 and 3 percent in 1947. Even at the war peak, this group made up only 6.7 percent of the total. In contrast, the percentage of total certificates issued for minors of 16 and 17 for work in manufacturing industries rose from 26.9 in 1940 to 52.3 in 1943, and, in 1947, dropped to 35.8—still above the 1940 level.

Young Workers Attending School

A small proportion of students in the age group 14 through 17, chiefly older boys, have always worked outside school hours in street trades, delivery work, and other irregular jobs. During wartime, however, part-time jobs for students of these ages and even younger became an accepted custom in many communities for girls as well as for boys. Scores of school systems adopted school-and-work programs which shortened classroom hours for certain school children to enable them to hold paid jobs. Openings for part-time work sprang up in stores, restaurants, and even in factories, and employers appealed to the schools

⁶* As certificates under most State laws are not required for newspaper sellers or carriers, these figures are not typical of the number of 14- and 15-year-old children so employed but only of the trend.

for youngsters willing to work after school, on weekends, and during vacations.

After wartime labor shortages were eased many school children continued to seek and to find work outside school hours. The number of students 14 through 17 years of age who were employed was estimated at 1,105,000 in October 1947,¹⁰ compared with 310,000 in April 1940; that is, of every 100 students of these ages, 16 held jobs in 1947, compared with 4 in 1940. The percentage employed increased far more among students than among nonstudents—of every 100 young persons of these ages who were not in school, 65 were employed in 1947, compared with 37 in 1940.

Minors Found Illegally Employed

The child-labor provisions of the Fair Labor Standards Act establish a basic minimum age of 16 years for employment of children in establishments that produce goods for shipment in interstate commerce, with certain limited employment allowed at 14 years of age, and a minimum age of 18 for specified hazardous occupations. In establishments inspected, the percentage of minors under 18 employed in violation of the child-labor provisions has actually increased since the war. During the year ended June 30, 1948, about 29,000 establishments were inspected. Of 26,678 minors under 18 employed in these establishments 4,628 or 17.3 percent were found to be illegally employed. Although such violations had occurred in every major industry group, they were especially prevalent in canneries (16 percent of the establishments inspected employed children below legal age), and in sawmills, planing mills, and plywood mills (nearly two-thirds of the minors employed were under the legal minimum age).

Nearly 60,000 young persons in approximately 16,000 establishments were found to be employed contrary to the child-labor provisions of the Fair Labor Standards Act during the first 10 years of its operation. Of these, 85 percent were under 16 years of age, the minimum for general employ-

ment, and 15 percent were 16 or 17 years of age but were working in hazardous occupations for which a minimum age of 18 has been established.

Job Hazards Higher for Young Workers

The need for strengthening measures for the protection of child workers is also indicated by their relatively high susceptibility to industrial accidents. In manufacturing industries as a whole, during a sample survey period, it was found that the frequency rate of disabling injuries for workers under 18 was almost one and a half times as high as that for workers 18 years of age and over (22.9 per million man-hours of employment, compared with 15.7). Excessively high injury rates for minors (running two to five times the rates for adult workers) were found in a number of industries where minors were extensively employed—including the bolt, nut, washer, and rivet industry, cutlery and edged tools, heating equipment, general industrial machinery, and transportation equipment.

Problems to be Faced

On the whole, this statistical analysis of young people in the labor market during recent years reflects a sincere and widespread acceptance of the Nation's special responsibility for its younger population in respect to their place in school and their place in the labor market. But it also gives some indication of the shortcomings in measures to ensure educational opportunity for minors, to prepare them for satisfactory working lives, and to protect them from premature or harmful employment. The solution to such problems lies partly in the responsiveness of communities and individuals to the needs, and partly in the resulting measures that may be adopted. Such measures include establishing a legal 16-year minimum age for employment in States that currently permit children under 16 to work in manufacturing plants or to leave school for full-time employment whatever its nature; broadening the coverage of the child-labor provisions of the Fair Labor Standards Act; increasing educational opportunity for young persons at the ages when many leave school for work; and encouraging better administration of existing legal child-labor safeguards.

Vocational Guidance: A Growing Factor in Labor Developments

HARRY A. JAGER¹

PRINCIPLES AND PRACTICES of vocational guidance have growing significance for workers and workers' organizations. The program extends through all the levels of public schools, through colleges, and into employment services and industry. During recent years, men in the armed forces have found certain vocational practices utilized in selection programs, the Veterans' Administration has established guidance provisions, and "personnel programs" for employees have been introduced on an expanding scale. Yet the adult worker has had little opportunity to assess vocational guidance from his own point of view—the implications for labor, whether good or bad, and the ways in which it may improve workers' prospects and satisfactions.

Labor needs to take full cognizance of vocational guidance, if only because of the rapidity with which the program is spreading throughout the world. The September issue of the *Monthly Labor Review* reported the recent action of the International Labor Organization on this subject, which may lead the way for 59 nations to develop vocational guidance as a national policy. Prospective advantages of a program such as the ILO tentatively recommended are discussed in this article. Problems related to vocational guidance were covered in the Executive Council's Report on Education submitted at the 1947 annual meeting of the American Federation of Labor.

¹ Chief, Occupational Information and Guidance Service, Division of Vocational Education, Office of Education, Federal Security Agency.

It is of the greatest importance that a study be made of the entire subject of * * * guidance and counseling * * * terms which require critical analysis, both in their relation to schools, veterans' programs and industry in general * * *.

Labor has a profound responsibility at this time in seeking to have public attention focused carefully upon the social standards and social objectives involved in the many counseling and guidance programs.

Relation to Key Labor Problems

Vocational guidance is closely concerned with certain current and important labor problems, of which five are cited.

(1) Means are required to acquaint both young persons and adults with the facts on job opportunities. Ignorance of these readily available facts is among the main causes of the often deplored "white collar complex." Probably over half of the young people in high school want to enter the professions, although only some 6 percent of the labor force is so engaged. The student is likely to learn more about college entrance requirements than about the apprenticeship openings in his own city. Local job opportunities and related facts of many kinds are not brought to his attention and this lack may persist into his life as an adult worker.

A chief objective of vocational guidance is to enable the individual to utilize occupational information in his planning, whether for a local entry job, for a long-term career, or for the occupational problems of the adult.

A prospective worker should also know something of the purpose and services of labor organizations, of the problems of labor and management, and of those skills necessary to enable the individual to apply for a job efficiently, and to analyze his own qualifications with relation to some new occupation. Attainment of some of these objectives will require installation of new instructional units to reach the persons concerned.

(2) Labor must consider the problem of turnover. No inference should be drawn that turnover, an inherent right in a free economy, can or should be abolished. Yet turn-over caused by obviously unsuitable employment can be reduced by guidance. Guidance can also aid the individual in making sure that early changes in jobs are try-out experiences to help him determine that one kind of work suits him better than another,

or to plan his series of initial jobs in terms of a career, each a step leading to some reasonable vocational achievement and adjustment. All turn-over which arises from obvious physical disqualifications should be preventable, and much of the turn-over traceable to certain personality disqualifications could be reduced.

The immense loss caused by turn-over is a fact acknowledged by management. For labor, the importance of reducing turn-over is not merely a matter of better individual adjustment. It involves lost wages, new training often at learners' wages, and even migration.

(3) Vocational guidance can offer help to labor in relating abilities to requirements. This problem has two facets: the identification of high degrees of ability; and the discovery of traits which make a person almost certain to fail in a particular kind of work. The element of high ability is not identified only with college or a profession: a high degree of dexterity can be related to opportunities in the delicate trade of tool making. Ability to influence other persons can mark the individual as a potential leader on a level of work justified by his other characteristics, from straw boss to plant manager. The color-blind person, for example, can be saved from aspiring to a railroad career, but might enter instead one of the many jobs which call only upon traits he does possess.

The millions of dollars spent upon worker and job analysis will render a greater return in future, if the prospective worker learns that he must to a reasonable extent match his qualifications with the requirements of his job. Vocational guidance tries to give aid in this direction—aid which is available from no other source.

(4) Promotion of the personal satisfactions of the worker is another labor problem. Vocational guidance does not encourage static attitudes; neither is it based upon the principle that the worker should be contented with whatever job he holds. Yet ignorance of his own characteristics and of the conditions of the working world cannot be an advantage to any worker. Vocational guidance aims to help the individual put his ambitions to the test of reality. The vocational guidance program helps to furnish the worker with facts (*a*) as to how he can best use the abilities he possesses, trained to the greatest possible extent available

to him, and (*b*) as to what opportunities there are for using these abilities in earning his living.

(5) The worker also needs to learn to take full advantage of such personnel programs as he encounters. These programs are frankly for the better selection and utilization of workers but, if successful, they are advantageous to the employer and contribute to success and happiness of the employee. The worker can employ a personnel policy to his own advantage even while cooperating with management in its objectives, by using his knowledge of his own abilities and of opportunities for a better job and quicker promotion. By the same token, he should be able to use such knowledge to detect more readily any exploitation which some personnel services may still contain and to avoid personal disadvantages.

Vocational Guidance Principles

Vocational guidance is not an exact science, but certain principles regarding standards of service and freedom of the individual to make choices underlie best practices everywhere. The principles which follow are substantially incorporated into the proposed recommendations of the ILO.

Freedom of choice is a principle extremely important to the American worker and noticeably violated in certain other countries. The function of vocational guidance is to enable the individual to make an intelligent choice as distinguished from the use of the techniques of vocational guidance for the sole purpose of selecting workers or of distributing them in some economic pattern. The chief distinction between the objectives of vocational guidance and those of industrial or military personnel programs is that the one serves the individual, with a realistic view to the interests of the employer; the others serve the employer or the armed forces, with a realistic view to the interests of the individual.

Vocational guidance is a right. Under a widespread scheme of free educational and other social provisions, it is essential that relevant services should be available to pupils in schools, and other services to adults whenever they need them. Eventually, a continuity of services from school through adulthood should insure the preservation of any benefits accruing from the accumulating values of records and procedures. Free public

services should prevail and such private services as are offered should be placed under careful public supervision.

Cooperative advisory action is a necessity. It includes three elements: (1) The vocational guidance agency within the framework of its sponsorship (school, employment service, or other auspices); (2) representatives of employers; and (3) representatives of labor. By means of cooperation a system of checks and balances can be provided to keep the services functional by a constant review of efficiency and outlook.

Vocational guidance services require trained personnel and recognized standards. Good methods and tools are available to vocational counselors and professional training is becoming increasingly common. The wide demand for counseling services has produced some charlatans, of course, but vocational counseling is currently regulated by law in many States, and substandard practices and practitioners are gradually yielding to public pressure.

Finally, vocational guidance is voluntary. Any other principle trespasses on personal freedom. In schools, vocational guidance services may be provided for all, but it is the pupils who must make any decisions even when the problems have been the subject of counseling. For adults, services should be general and convenient, but their universal use must be contingent upon proved value.

Vocational Guidance Practices

Many of the professional terms with which the vocational counselor deals have become familiar, but their meaning is often confused. Counseling is often offered on a commercial basis by irresponsible individuals with bad results. Yet the actual means by which vocational guidance does its work have proved themselves in performance. Good results require certain practices which are summarized below.

The individual must be described in every practicable way which has application to his occupational problems. He may have a prejudiced view of tests and questionnaires. However, they are one means of describing characteristics, which, in schools, is supplemented by other significant evidence cumulated from the early grades. Adults, however, frequently must depend much more on

tests for lack of a cumulative record. Traits measured by standardized tests yield an incomplete picture, often only supplementary, to be discounted if other evidence is stronger and contradictory.

For example, vocational guidance can reveal facts hitherto undiscovered or of no significance for the individual's planning: a physical weakness not serious to that point, but crucial in a proposed employment; a particular deftness never before utilized; long experience not in a paid job which involves traits and skills of significance for a potential vocation. Even in cases of persons with low abilities in many categories, an aptitude may be discovered which makes that person trainable or employable in some specialty. For the seriously handicapped, every remaining ability is identified. The emphasis is upon positive factors—physical, social, scholastic, vocational, or related to personality—although it is clearly important to identify any trait which is negative in the sense that it might prevent success in a particular contemplated occupation.

The competent vocational counselor helps the counselee to recognize work he probably can do well and work he should not try at all, building for him a foundation for planning his training and career, and promoting his self-confidence.

Securing and interpreting information about occupational fields is an important practice in vocational guidance. A worker may know something about his own job and a few related jobs but is seldom familiar with conditions which control trends. Lack of such information may lead him to take a short-term job at high wages in preference to one with smaller wages but with a prospect of steady work and promotion. It is only after he has been hired that he learns duties of an occupation and his own ability to perform them.

The vocational counselor does not expect the individual to have a complete occupational background. It is his duty to acquaint his client with direct and related facts, including the worker qualifications and duties of any job, and any training necessary to enter and progress in the vocation, in order to facilitate the client's decision.

The counseling interview is the method by which the guidance services described above are given personal application and is the keystone in guidance. Obviously, this procedure, performed by a trained person, is the only means of making

the principles and practices of vocational guidance work for the individual.

The main practices of vocational guidance just enumerated are supplemented by such activities as local job surveys, placement services, and research of various kinds. These are often the responsibility of many agencies—public, private, national, and local. Regardless of the auspices under which such work is done, vocational guidance is the means of making the results available to the individual worker for use in his every-day planning.

Status of Vocational Guidance

Substantial gains in making vocational guidance services available are taking place, and these have been accelerating in the last 10 years.

Vocational guidance in schools is supported by State departments of education in 44 States. Nearly all use some Federal funds under the George-Barden Act of 1946 and all receive professional assistance from the Office of Education of the Federal Security Agency. About 4,000 schools provide some specific guidance programs, which are carried on by approximately 8,000 individuals. In view of the 26,000 public secondary schools in the country, this showing is not very good. However, facilities for vocational guidance in schools have at least doubled in 10 years, and the number of States with supervisory provisions has increased from 1 to 44. Improved training for counselors, supervision of local programs, and better techniques and tools are appearing. All programs are based upon giving services to adults as well as to persons in schools.

Several Federal or Federal-State agencies are providing well organized and staffed vocational guidance services. The Veterans' Administration requires all the beneficiaries of Public Law 116 (for disabled veterans) to take advantage of its widely available counseling facilities, and offers these services to all other veterans. State employment offices provide employment counseling which is utilized by something more than a million

persons a year. A great deal of work done by the United States Employment Service has gone into training programs and into providing employment information, job analysis, workers analysis, and tests and other counseling tools. The civilian Vocational Rehabilitation Service provides complete guidance service for every person it trains and places, a program which has a case load of a quarter million persons annually.

Facts disclosed by the Bureau of the Census, the Department of Commerce, and the Occupational Outlook Service of the Bureau of Labor Statistics serve all the agencies working in the field of vocational guidance. In addition, public and private effort is producing in an ever-increasing flow new tools and methods for guidance purposes.

Finally, in countries other than the United States, guidance services are becoming increasingly available. Confusion still exists in many of these countries as to what extent the individual is to be the beneficiary. In others, the program is only elementary. The pending recommendations of the ILO, however, augur future clarification and progress in seeing and reaching professional standards adopted by common agreement.

Better general understanding of the purposes of vocational guidance and its potentialities and limitations is a next step. The obvious benefits of a comprehensive program can scarcely escape the attention of the great majority of workers and their leaders as well as of management. There should be an increasing demand for vocational guidance as one of those rights important to the welfare of workers everywhere, and to the economic structure of which they are a part.

For both worker and employer the basic assumptions on which vocational guidance is built are among the most important earmarks of a system of free enterprise. In a world struggle between that system and any other, the development of vocational guidance practices can be a measure of defense by strengthening our own economy, and of offense by supplying a weapon against the ignorance of workers upon which their exploitation by totalitarian systems in part depends.

The International Cooperative Congress, September 1948

FLORENCE E. PARKER¹

REAFFIRMATION OF ITS long-time political and religious neutrality and the statement of its conviction that the cooperative method is superior to nationalization in industries which cater to the individual consumer were among the outstanding results of the Seventeenth Congress of the International Cooperative Alliance, held in Prague, Czechoslovakia, September 27-30, 1948.

The present membership of the Alliance consists of the national cooperative organizations in 31 countries, representing 102 million individual members. At the Congress, 24 of these countries were represented.² Observers included representatives of the International Labor Office, the United Nations Organization, UNESCO, the International Trade Organization, and the Food and Agriculture Organization, and of the governments of Czechoslovakia, Great Britain, Italy, and the United States.

Resolutions

The resolutions passed by [the Congress included the following:

¹ Of the Bureau's Office of Program Planning.

² The countries represented at the Congress were Austria, Belgium, Bulgaria, Canada, China, Czechoslovakia, Denmark, Finland, France, Great Britain, Greece, Holland, Ireland, India, Israel, Italy, Norway, Poland, Rumania, Sweden, Switzerland, United States, Union of Socialist Soviet Republics, and Yugoslavia. The American delegation (representing the Cooperative League of the U. S. A.) consisted of Howard A. Cowden, president and general manager of Consumers Cooperative Association, Kansas City, Mo.; Lloyd R. Marchant, general manager of the International Cooperative Petroleum Association; Clifford Miller, Consumers Cooperative Association; and Dwight Townsend, Consumers Cooperative Association.

In a resolution on *promotion of cooperation*, the Congress appealed for use of "all the energies and resources" of the cooperative movement to further the progress of cooperation in underdeveloped areas, and directed the Alliance to continue its work of spreading knowledge of cooperative principles and practices. It also urged national cooperative organizations in more-advanced countries not only to promote the commercial exchange of products with cooperative organizations in underdeveloped countries but to work with the United Nations Organization in promoting the "general and social progress" of such countries.

The advantages of *cooperative housing*, especially for lower-income families, were stressed. National cooperative organizations affiliated to the Alliance were urged to establish contact with the cooperative housing movement in their respective countries and explore (jointly with the housing societies, if feasible) the production of key building materials. The desirability of bringing national housing cooperatives into membership in the Alliance was also emphasized.

The resolution on *world oil resources* urged the effective implementation of the Atlantic Charter principle of free and equal access to raw-material resources of the world. With especial reference to petroleum products, it requested UNO to study their exploitation and the domination of their distribution by monopolistic combinations, with view to developing measures for "safeguarding, by international agreement, the expansion of production and the free access to petroleum, and also for providing for the consumers all reasonable facilities to cover their needs through organizations of their own."³

The Congress urged that all effort be made to induce all forms of cooperation, including *agricultural cooperatives*, to join the Alliance, and recommended the creation of commercial enterprises owned jointly by agricultural and consumer cooperatives.

The resolution on *peace* pointed out that the promotion of peace has been a task of the cooperative movement from its beginning, and that it is the duty of cooperatives to "stand prepared to fight war by untiring united efforts."

³ As permanent consultant to the Economic and Social Council of the UN, the Alliance has the privilege of submitting to that organization measures for inclusion in its agenda.

The *nationalization* resolution was based upon one of the two papers presented to the Congress. The paper on this subject, dealing mainly with the situation in Great Britain, noted that the English cooperative movement favored nationalization of certain basic industries and functions. In certain eastern European countries the cooperative movement has become "linked in close collaboration" with governments which control all fields of economic life. "The problem is, how far can close collaboration be carried, without sacrifice of the freedom of the movement?" Cooperatives have grown in strength in these countries, but only because of their "employment as an instrument of the State." * * * Cooperation finds its greatest strength in its democratic basis, whilst nationalization, because it operates a control much more remote from the people, inevitably carries at least a danger of restrictive bureaucracy."

This paper evoked considerable discussion. It was the subject of immediate attack by a Russian delegate who charged that the author, an Englishman, knew only conditions in Great Britain, that nationalization there had been carried out "in the interests of the bourgeoisie," and that the former coal owners had been "paid in full," although most of the mines were "defunct." Delegates from Greece and Italy argued, respectively, that centralized industry should not be left in private hands, and that the consumer cannot be singled out for special consideration under the new economic order. A Polish delegate advocated that the Alliance declare itself in favor of nationalization in capitalistic countries and that it support the nationalization of all big industries. A British delegate declared that the continued functioning of cooperation is necessary to the independence of the people. A Swedish delegate, who favored the author's position in general, took exception to one clause in the proposed resolution which favored nationalization of "key industries," pointing out that these would be difficult to define and suggested the deletion of the clause. This was accepted by the author.

"Cooperation, having its basis in voluntary action," the resolution stated, "makes a special contribution to democracy which can find no substitute in the inherent compulsions of State action." Although nationalization and cooper-

ation complement each other, "in those industries and services which cater directly for the individual consumer, and where personal preference and taste are important, cooperation provides a method of operation superior to nationalization. * * * The Congress, therefore, on behalf of the cooperative movement, claims full and complete recognition of voluntary cooperation in the new collective economy; it rejects any suggestion of compromise that would offer to cooperation some static position of subordinate or restricted form and enterprise; and it demands for cooperation the ability to function and expand, thus giving to the individual the democratic right to accept the principle of voluntary association."

The resolution on *cooperation in the international sphere* was based on the second of the two papers, which took the position that, in general, international cooperative enterprises should be owned by national consumers' cooperative wholesales, but farmers' organizations should not be excluded from them. In spite of difficulties of international exchange of currencies, and other obstacles, a promising development is the International Trade Organization which 53 countries have approved. Adoption of its principles (including the basic one of freedom) would, in the opinion of the author, make possible the collaboration of cooperators in the international market.

National cooperative organizations were urged, in this resolution, to work for the implementation in their respective countries of the main principles embodied in the ITO charter,⁴ "with a view to insuring for the cooperative movement the degree of freedom in international trade which is required for establishing successful joint international cooperative production and trading enterprises."

Amendments to Rules

Several amendments to the ICA governing rules were adopted. One dealt with the political neutrality which has been one of the cornerstones of the Alliance since its formation in 1895. The Soviet Union delegation introduced a measure which would, in the words of the mover, commit the Alliance to "an active political fight for peace and democracy" and to the "organization of a

⁴ See ITO: Employment and Economic Development, Monthly Labor Review, November 1948.

socialist society." The measure that was finally passed, over the opposition of the eastern European bloc,⁵ was as follows:

The ICA regards cooperation as neutral ground on which people holding the most varied opinions and professing the most diverse creeds may meet and act in common.

The ICA shall not associate itself with any political or religious organization.

Such independence, on which the unity of the international cooperative movement depends, shall be maintained in all the meetings and in all the publications of the ICA.

Among the other amendments to the rules was one adding Russian to the other three official languages of the ICA (English, French, and German), but leaving it to the central committee to decide the extent to which each shall be used. The rules were also amended in a number of other respects, principally to take cognizance of the fact that the Alliance is no longer a world federation of consumers' cooperatives only, but includes practically all types of cooperatives.

A series of Russian-sponsored amendments was rejected. These would have—

⁵In the voting a sharp cleavage was immediately evident between the Soviet Union (and its satellites) and the other nations represented. The minority votes on practically all questions consisted of those of the Soviet Union, Bulgaria, Czechoslovakia, Poland, Rumania, and Yugoslavia, of the Communist delegates (about two-thirds of the total) from Italy, and of several delegates from Great Britain.

(1) Provided for two assistants to the general secretary of the Alliance, to be appointed from the largest national cooperative movements, i. e., those of Russia and Great Britain. The president of the Alliance (an Englishman) opposed this as "most undemocratic."

(2) Eliminated conformity to Rochdale principles as a requirement for membership in the ICA and phrased the membership requirements in such vague terms as to admit (in the words of the president) "anything from a football team to a church choir."

(3) Required a two-thirds vote for the passage of any measure. Had this been in force at the Prague congress, the eastern nations would have held veto power and only one, possibly two, of the actions taken would have been possible.

Next Congress

T. H. Gill, president of the English Cooperative Wholesale Society, was elected president of the Alliance, succeeding Lord Rusholme. Howard Cowden (United States) was among those elected to the Executive Committee.

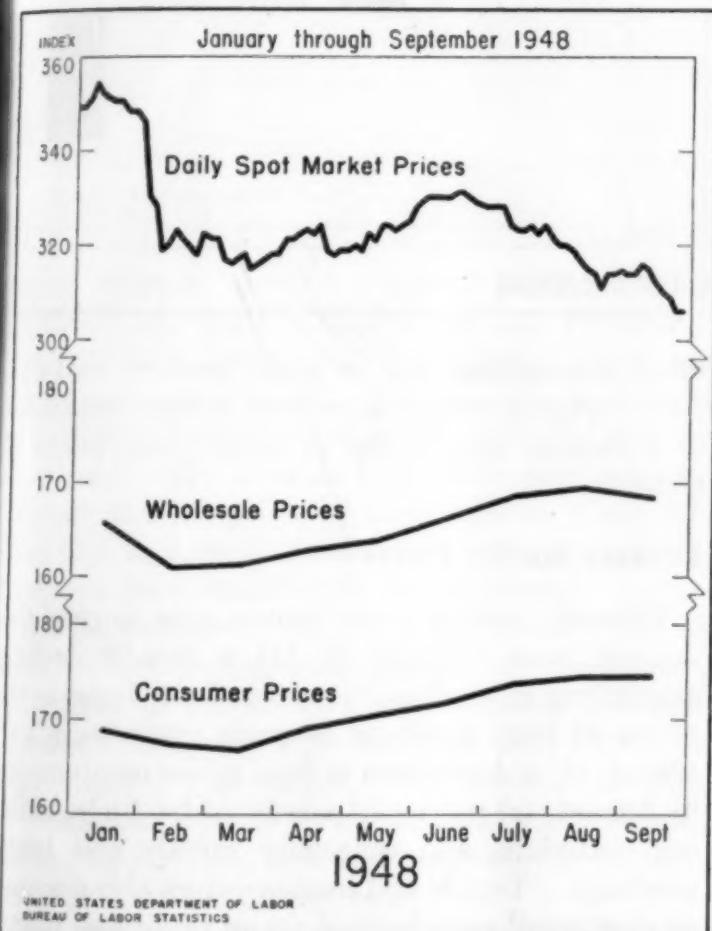
The next congress will be held in 1951, at a place to be decided upon by the central committee; invitations were received from the national cooperative organizations of Denmark, India, and Italy.

Summaries of Special Reports

Prices in the Third Quarter of 1948

THE GENERAL MOVEMENT of prices in the third quarter of 1948 tended toward a balance between a considerable easing in the prices of agricultural commodities and a continuation of the postwar upward movement in the prices of industrial goods.

Trend of Prices



The Bureau of Labor Statistics comprehensive primary market price index reached a new all-time peak in August and then declined slightly in September; the consumers' price index reached its peak in August and leveled off in September, as

declining food prices were offset by increases in the other components of the index. Prices on organized commodity exchanges were sharply lower over the quarter, dominated by declines in the prices of domestic agricultural commodities, notably grains and cotton.

During this period, production costs were generally increased as the "third round" of wage increases spread throughout the economy and as price advances were recorded by such basic materials as steel, coal, and nonferrous metals. Higher freight rates were also incorporated in the price structure during August.

Prices of some consumer goods, particularly men's clothing and cotton textile products, demonstrated weakness in the initial stages of distribution, but still continued to advance at retail. The possibility of future retail price declines in this area became more evident, as pipe lines were obviously being filled and high prices met increasing consumer resistance.

Farm prices moved sharply lower as record breaking domestic crops came close to realization and the European crop prospects approached more nearly their prewar magnitude. Toward the end of the quarter, the weakness in farm prices spread, to a limited extent, to the retail prices of meats, butter, margarine, and fruits and vegetables.

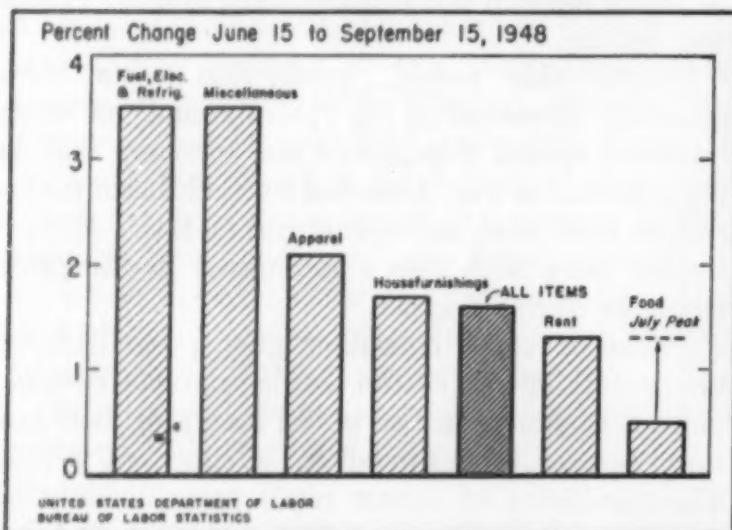
In September, the Board of Governors of the Federal Reserve System, in line with the authority granted by the Congress meeting in special session, took two steps in the field of inflation control: First, the reimposition of certain regulations governing the terms of installment credit, and second, by increasing slightly the reserve requirements of member banks. The Treasury Department also increased the rate of interest on short term Government notes by one-eighth of a percent.

Retail Prices

Retail food prices advanced to an all-time peak in July, but then turned down contraseasonally in

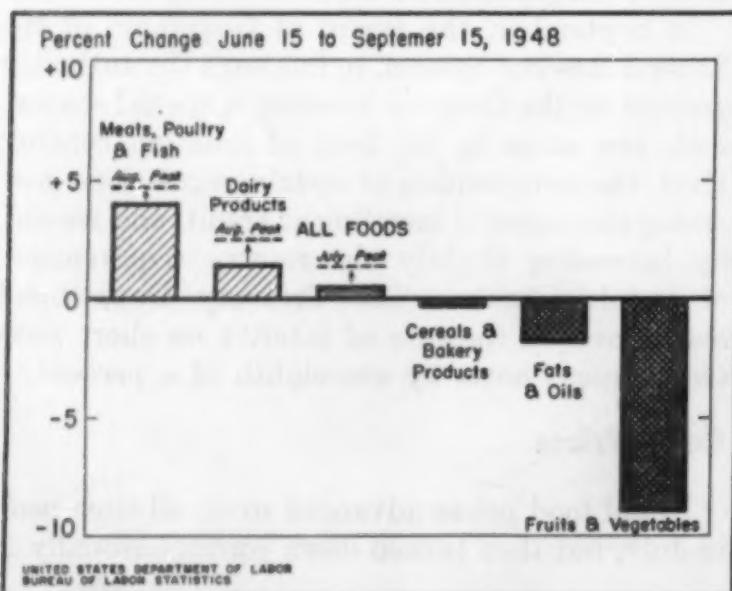
both August and September; however, on September 15 they were still slightly above the level of June 15, 1948. The remaining commodities and services for which moderate-income city families spend their money continued to advance. The greatest advances over the quarter were in the prices of items which normally tend to lag behind the price cycle—utilities, transportation, and miscellaneous services. Rents, under control, advanced moderately.

Consumer's Price Index, by Groups



The decline in food prices was led by a sharp drop in the prices of fresh fruits and vegetables and some easing in margarine. By September 15, declines were also being registered in the meat, poultry, and fish group; normally, prices in this group tend to rise in the fall. One of the more

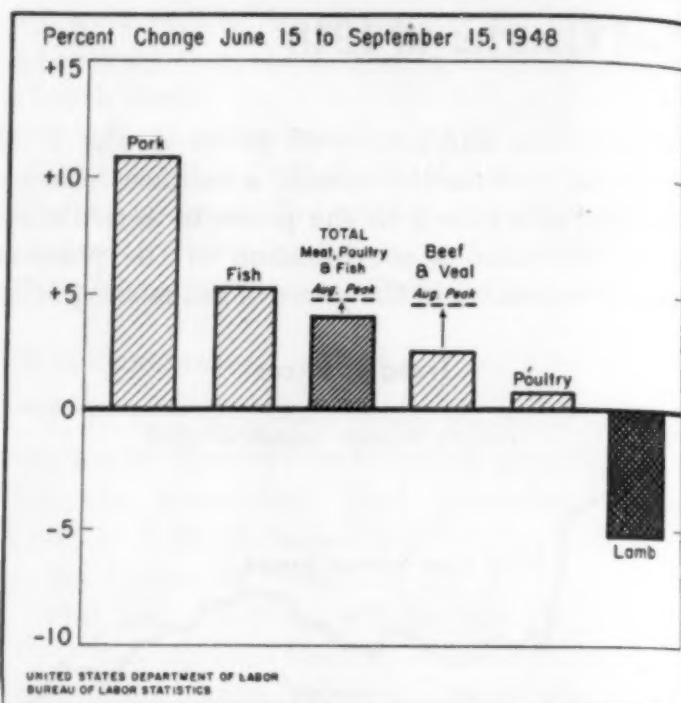
Retail Food Prices, by Groups



significant declines occurred for butter, which moved contraseasonally from an average for the United States of 92 cents a pound in July to 87 cents in September.

Retail prices of all meats (including poultry and fish) advanced nearly 5 percent to their peak in August, before declines in beef and lamb prices

Retail Meat Prices, by Groups



offset a continued rise in pork, poultry, and fish. As the quarter ended, there were strong indications of a further sizable dip in retail meat prices in October.

Primary Market Prices

Primary market price movements during this quarter were marked by (a) a steady decline, amounting in total to 3½ percent from June, in the prices of farm products as grain crops were harvested; (b) a down-turn in food prices commencing in August; (c) persistent advances for fuels, building materials, and especially metals and metal products. Textile and leather prices also declined as slow retail sales backed up on retail and manufacturers' inventories.

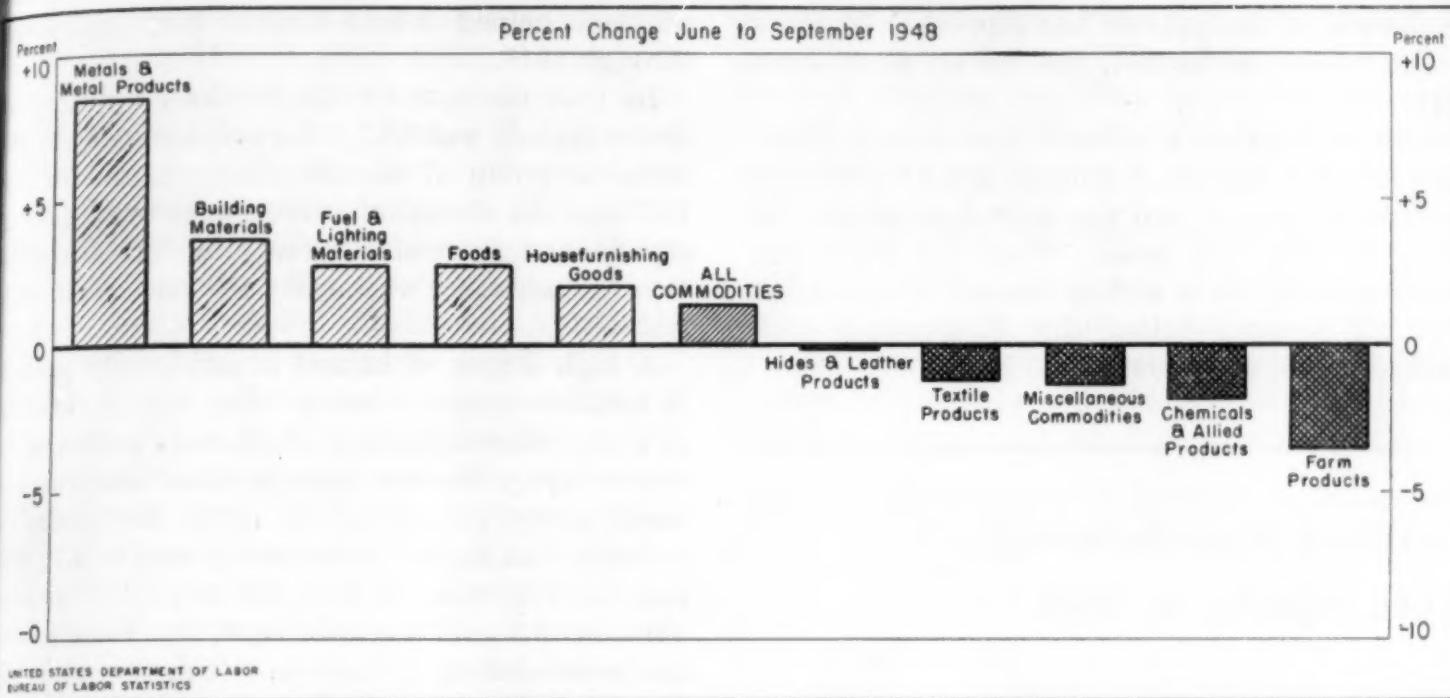
The greatest advance during this period was 8.5 percent for metals and metal products, as both ferrous and nonferrous metals rose very sharply in price at the end of July. Wage increases of about 13 cents an hour, price increases of about 10 percent, and shifts to f. o. b. mill pricing were

letter, which went into effect in July by most large steel producers. The increase in steel prices also affected general building material costs: both structural steel and plumbing and heating equipment advanced. The primary market prices of the chemical group

declined nearly 2 percent on the average, as sharply lower tallow prices caused an 11-percent drop in the average price of fats and oils.

The largest decline over the quarter was 15½ percent for grains, mainly because corn and barley

Wholesale Price Index, by Groups



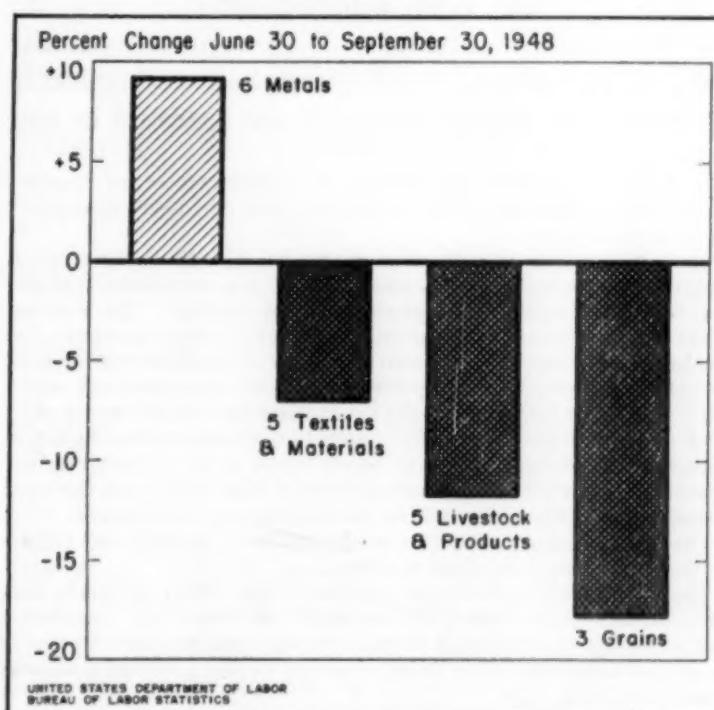
prices dropped toward support levels. Cereal products, one step further along the processing line, declined less than 1 percent. Livestock prices rose to a record high in July and then turned somewhat lower, but still ended the quarter at a level only exceeded by July and August. Primary market prices of meats rose to a new all-time high in August, 1 month after the peak in the livestock markets and then also declined.

On September 30, the average of prices of 28 commodities traded on organized exchanges and spot markets was about 7 percent below the comparable average on June 30, 1948, and 8 percent lower than a year earlier. The decline was confined almost entirely to agricultural commodities, as copper, zinc and steel scrap registered increases ranging from 6 to 24 percent.

The drop in the prices of agricultural commodities reflected a decline from the very high levels of June 30 toward parity prices. By September 30, most commodities were relatively close to parity and except for livestock, further large declines over the remainder of 1948 were not very likely because of the floors of Government support. As of September 30, average spot

market prices of domestic agricultural commodities were back to the levels which prevailed in early 1947, marking the end of a cycle which saw wheat go to \$3, corn to \$2.80, and cotton to 40 cents.

Commodity Market Prices



Quotations of \$32 a hundredweight for steers and \$28 for hogs which prevailed on September 30 were extremely high, but were considerably below the record prices of \$36 and \$31, respectively, reached in July and August. In sharp contradiction of the normal seasonal movement, butter prices turned sharply downward in mid-July and by the end of the quarter had dipped to 65 cents in the wholesale market, the lowest since June 1947.

Print cloth prices continued their steady downward trend of the past 9 months and 64 x 60 grey goods at 16 cents a yard was more than 40 percent below the late 1947 peak. Wool top prices also moved steadily lower and by the end of September were 22 percent below the \$2-a-pound peak reached in mid-June 1948.

Fertilizer Manufacturing: Work Injuries in 1946¹

A DISABLING WORK INJURY for every 14 employees, the highest injury-frequency rate in the chemical-manufacturing group of industries, and one of the highest injury-severity rates in the entire list of manufacturing industries—this was the work-injury record of the fertilizer manufacturing industry for the year 1946.²

Although the 1946 injury-frequency rate for fertilizer manufacturing—35.7—represented the peak of an upward trend which had its beginning in 1940, high injury rates are not unusual in this

¹ By Frank S. McElroy and George R. McCormack of the Bureau's Branch of Industrial Hazards. A more complete report will appear in a forthcoming bulletin.

This study was based upon summary reports from 521 fertilizer plants, which in 1946 employed 27,400 workers, representing approximately 83 percent of the estimated total employment in the industry. The reporting group included 336 dry-mixing plants, 78 integrated plants combining acid and superphosphate production with dry-mixing, 57 plants combining superphosphate production with dry-mixing, 18 plants producing only superphosphate, and 32 plants which did not indicate their specific operations.

² A disabling injury is one which results in death or permanent physical impairment, or renders the injured person unable to work at any regularly established job, which is open and available to him, throughout the hours corresponding to his regular shift on any day after the day of injury.

The injury-frequency rate is the average number of disabling work injuries for each million employee-hours worked.

The severity rate is the average number of days lost or charged for each 1,000 employee-hours worked. The standard time-loss ratings for fatalities and permanent disabilities are given in the American Standard Method of Compiling Industrial Injury Rates, approved by the American Standards Association, 1945.

industry. In the prewar years 1938 and 1939 the frequency rate for fertilizer manufacturing was about 26; for all chemical manufacturing industries it was about 10, and for all manufacturing about 15. Wartime influences, which began to be effective in 1940, pushed the frequency rates for most industries to higher levels, reconversion problems helped to hold them at those high levels through 1946.

In 1946 the rate for the fertilizer industry, as above stated, was 35.7,³ the average rate for the chemical group of manufacturing industries was 15.7 and the all-manufacturing rate was 19.9. A significant feature of these rates is that their relation to each other was nearly the same as in 1938 and 1939.

A high degree of hazard is admittedly present in fertilizer manufacturing. But this is also true in many other industries which have achieved far better injury records through strict attention to basic safety principles. In 1946 the explosives industry had an injury-frequency rate of 5.7; iron and steel a rate of 9.5; cement, 11.0; motor-vehicles 10.8; and shipbuilding 20.7. Even among the woodworking industries, which are generally listed at the top of all hazardous operations, planing mills had a slightly better rate (35.1) than fertilizer manufacturing in 1946. Only 14 of the 151 manufacturing industries for which 1946 rates were available had rates higher than the fertilizer rate.

The available information indicates that about 2,360 employees in fertilizer manufacturing were disabled by work injuries in 1946. About 20 died as a result of their injuries, and about 60 were left with some form of permanent physical impairment. The other 2,280 were more fortunate in that their disabilities were temporary in nature, leaving no adverse effects to restrict their working ability.

Immeasurable humanitarian and social implications are presented by these injuries. From the economic viewpoint alone, however, they represent a very large expense item which the industry must absorb. Actual time lost by fertilizer workers because of work injuries experienced in 1946 is estimated at about 48,000 man-days. On the basis of average weekly earnings of \$32.92 for production workers in the industry during that

³ In 1947 these rates moved down to 31.6 for fertilizer manufacturing, 12.1 for the chemical group, and 18.8 for all manufacturing.

and 1939, this would represent a direct loss of \$225,000 wages alone.

Time lost within the year, however, does not adequately measure the real loss resulting from injuries. Many of the seriously injured workers will find that their earning ability is reduced for the remainder of their lives. With regard to those who were killed, the loss is equivalent to their entire expected earnings during the years in which they would have continued to work if their careers had not been cut short. If additional allowance is made for the future effects of the deaths and permanent impairments included in the total, the economic time loss chargeable to the injuries experienced in 1946 would amount to about 234,000 man-days. Evaluated on the basis of 1946 earning levels, this would represent a loss of \$1,100,000 in present and future earnings, all of which must be absorbed by the employers, the workers, their dependents, and the consumers.

Wage losses, however, represent only part of the total cost of accidents which produce work injuries. In addition there are payments for medical and hospital care and many indirect costs such as damage to materials or equipment, lost production, and supervisory time spent in caring for the injured or reorganizing operations after the accident. The indirect costs are seldom a matter of record, but this does not lessen their reality. Studies have indicated⁴ that for manufacturing generally, indirect costs of injury-producing accidents average about four times the direct cost of compensation payments plus hospital and medical expense. Assuming that this ratio is approximately correct for the fertilizer industry, it may be estimated, conservatively, that the indirect costs associated with injuries in that industry during 1946 amounted to at least 3.3 million dollars and that the total cost probably was over 4.4 million dollars.

Accident Causes

This analysis is based on the accident records of 185 of the fertilizer plants surveyed.⁵ Although the combined injury-frequency rate of 41.6 for this group was higher than the industry average,

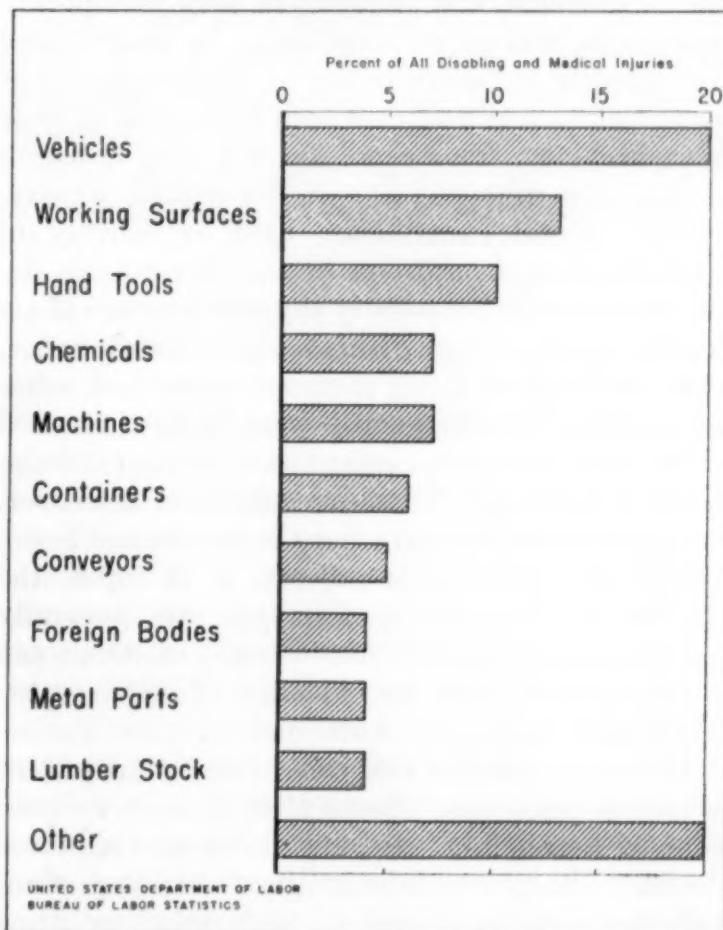
there was no reason to believe that the pattern of accidents in these plants was essentially different from that of the entire industry.

In order to broaden the analysis and permit greater detail, this part of the survey was extended to include not only disabling injuries, but also all other injuries requiring treatment by physicians. These data, covering 2,532 injury cases, were then analyzed according to the American Recommended Practice for Compiling Industrial Accident Causes, as approved by the American Standards Association.

UNSAFE WORKING CONDITIONS

The most direct, and usually the most productive, accident-prevention measures are those which eliminate unsafe working conditions. Extensive engineering and the expenditure of large sums of money may sometimes be necessary to

Major Agencies Involved in Accidents in the Fertilizer Manufacturing Industry, 1946



control particular hazards. Most unsafe conditions, however, can be controlled simply and easily through supervisory action. Unfortunately, the need for such action is frequently overlooked

⁴See *Industrial Accidents Prevention*, by H. W. Heinrich, New York, McGraw-Hill Book Co., 1941.

⁵These plants employed nearly 15,000 workers during 1946. Bureau representatives transcribed from the original accident records of these plants a complete account of each work accident experienced by their employees during 1946.

because the existing hazards have become so much a part of the work environment that neither workers nor supervisors recognize their influence in producing accidents. Hazards arising from poor housekeeping, from inadequate maintenance standards, or from operations which have gradually expanded from their original scope without a definite plan often fall into this category. Basically, the existence of such hazards represents supervisory failure and carries a strong implication of inefficient operation. A very large proportion of the accidents in fertilizer manufacturing stem directly from such supervisory failures.

Defective agencies. The general need for more adequate inspection and immediate repair or replacement of imperfect equipment, tools, and materials was strongly indicated by the fact that 36 percent of the analyzed accidents were directly due to defective agencies.

Slippery floors and slippery surfaces on platforms, scaffolds, and gangplanks were particularly prominent sources of accidents. In many cases the slippery surface was due to accumulations of loose fertilizer or rockdust—an indication of poor housekeeping. This condition was very common in the superphosphate and dry-mixing departments. Metal gangplanks, used extensively in hand-trucking operations in the dry-mixing departments, were frequently slippery because of excessive wear—a sign of inadequate maintenance.

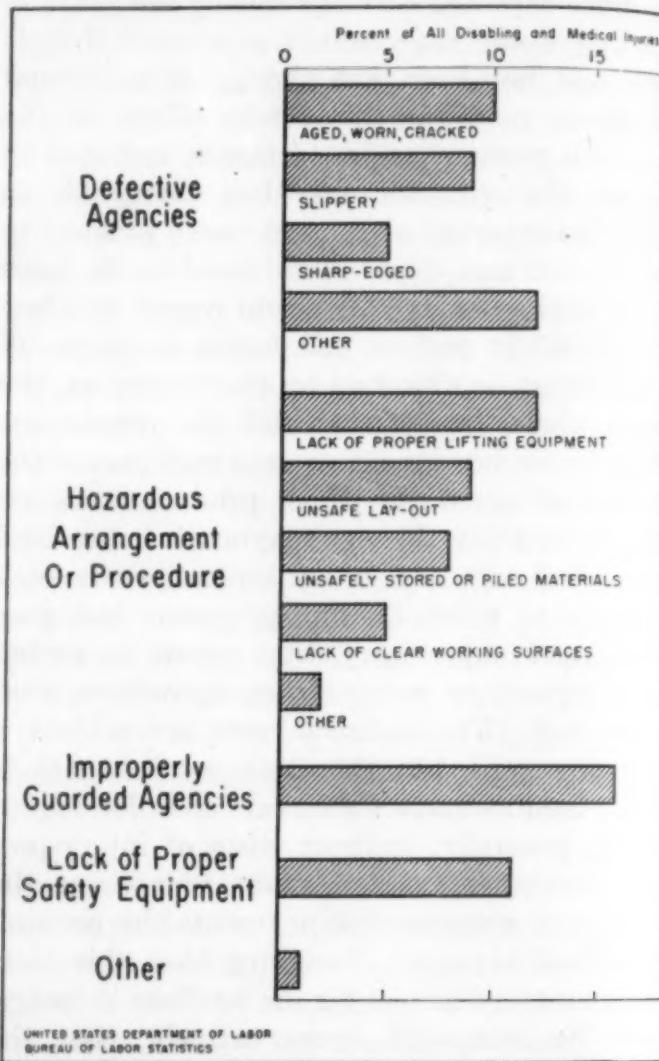
In addition to being slippery, floors and other working surfaces frequently were broken, cracked or irregular to such an extent as to present definite tripping hazards. These irregularities, moreover, frequently caused hand trucks to swerve and bump into nearby persons or objects, or to injure the operators. Hazards of this type are generally quite apparent, and their continued existence can be interpreted only as evidence of slack supervision and inadequate maintenance.

Defective vehicles also constituted a prominent source of accidents. Some of these were railroad cars with rough or slippery floors or splintered doors. The great majority, however, were plant vehicles such as payloaders with defective lifting mechanisms, or hand trucks with rough or splintered handles, loose wheels, or broken braces.

Other defective agencies, which caused fewer but nevertheless substantial numbers of accidents, included worn or cracked hand tools, worn or

strained hoisting equipment, and sharp-edged worn parts on conveyors, machines, boilers, tanks. Most of these defects should have been apparent to the supervisors in the normal course of operations and specifically should not have been overlooked if regular safety inspections were made.

Major Types of Unsafe Working Conditions in Fertilizer Manufacturing Industry, 1946



Hazardous arrangements or procedures. The hazards included in this general group usually result from a failure to plan operations so that they may be carried on safely, or from a failure to enforce operating rules relating to safety. Accounting for 36 percent of the analyzed accidents, this group of hazards ranked with defective agencies as an outstanding source of accidents in the industry.

Operations involving the handling of heavy or bulky materials always present serious injury possibilities and require thorough planning and supervision in order that accidents may be avoided. Careful consideration should be given

determination of the maximum weight any individual will be expected to lift, and mechanical equipment or sufficient additional help should be provided whenever the weight exceeds the determined limit. The many strains and sprains reported as resulting from lifting excessive weights, particularly in the dry-mixing and maintenance departments, indicate that the industry generally is not given sufficient attention to this phase of safety.

Safe operation of plant vehicles and safe handling of inherently hazardous materials such as acids also require careful planning by the supervisory staff and strict enforcement of the established rules of procedure. Vehicles, particularly hand trucks and pay loaders, were involved in a considerable number of collision accidents which probably could have been avoided if designated lanes for vehicular traffic had been provided and traffic rules had been enforced. Traffic accidents were common in nearly all departments. However, the greatest volume of accidents ascribed to other types of unsafe procedures were in the sulphuric-acid and superphosphate departments. Many of the latter mishaps involved a failure to provide the proper tools or equipment for the work at hand, which resulted in misuse of available equipment.

Materials and equipment placed in irregular and unstable piles, stored materials which encroached upon aisles and workplaces, loose materials and equipment left in aisles and workplaces, and congestion of materials in small spaces were common among the poor housekeeping conditions which led to accidents. Loose superphosphate or fertilizer, lumber stock, and bags of fertilizer were the agencies most commonly involved in these accidents. Tripping accidents were very common.

Inadequately guarded agencies. Inadequately guarded agencies were responsible for approximately 16 percent of the analyzed accidents. Gears, belts, or other moving parts of machines and conveyors were the principal accident sources in this group. Over 60 percent of the accidents involving machines and conveyors resulted from inadequate guarding.

Scaffolds, platforms and ramps without railings or toeboards, and unguarded openings in floors were relatively common causes of accidents. The

record also indicated that many of the ladders used in fertilizer plants were not equipped with ladder safety-shoes, that hand tools such as knives frequently had no handle guards, and that electrical equipment was often ungrounded.

Lack of personal protective equipment. All plants reported that personal protective equipment was provided and that its use when necessary was required. The accident reports indicated, however, that observance of this requirement was inadequate. Nearly 11 percent of the accidents for which the cause was determined were found to have occurred because the prescribed safety equipment was not used.

Accidents in which workers experienced eye injuries because they were not wearing goggles or face shields while working with chemicals or in the very dusty areas of superphosphate or mixing departments were most common. In addition, a number of cases of respiratory irritations could have been prevented by the use of respirators, and many hand and toe injuries could have been avoided through the use of gloves or safety shoes. The sulphuric-acid and superphosphate departments were most remiss in use of protective equipment, but the dry-mixing and maintenance departments also had very unfavorable records.

UNSAFE ACTS

For the purpose of accident analysis, an unsafe act is defined as "a violation of a commonly accepted safe procedure."⁶ Literally, this means that no action may be designated as unsafe unless there is an alternative safe procedure, but it does not imply that the employee who committed the unsafe act must have known the alternative safe method. It is apparent from the analysis that many of the injured employees knew the safe methods but decided not to follow them. It is also evident that many other employees committed unsafe acts simply because they did not know the safe procedures. The elimination of unsafe acts, therefore, is a twofold problem: first, employees should be carefully instructed in the safe methods of performing their duties; and, second, an adequate number of well-trained, safety-minded supervisors should be provided to enforce safe practices.

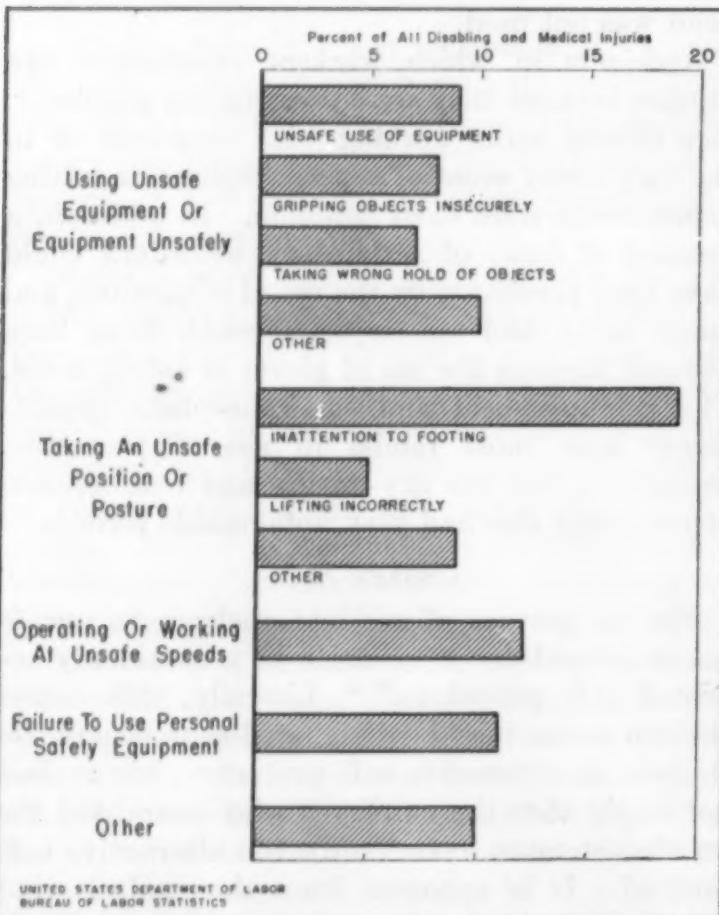
Four general groups of unsafe acts were outstanding—using unsafe equipment or using equip-

⁶ In American Recommended Practice for Compiling Industrial Accident Causes, approved by the American Standards Association, 1941.

ment unsafely; assuming unsafe positions or postures; operating or working at unsafe speeds; and failing to use personal safety equipment or to wear proper clothing.

Using Unsafe Equipment or Equipment Unsafely. Unsafe use of equipment, or its use for purposes for which it was not intended, accounted for about 9 percent of the analyzed accidents. Generally, these acts involved misuse of hand tools—for instance, using crowbars or pinch bars as hammers.

Major Types of Unsafe Acts in the Fertilizer Manufacturing Industry, 1946



This type of unsafe act was particularly frequent in the maintenance departments, but was also responsible for a high proportion of accidents in sulphuric-acid and superphosphate departments.

Gripping objects insecurely accounted for about 8 percent of the accidents. Many workmen, as a result of improper handling of lumber stock, hand tools, metal parts, bags of fertilizer, and similar articles, dropped these objects and in consequence suffered bruised or fractured feet, toes, hands, or fingers. Accidents caused by loose handling of materials or equipment were most common in the maintenance departments.

Taking the wrong hold of objects was the cause designated for accidents in which employees permitted their fingers to be caught between objects which they were piling, or between gangplanks and floors while they were placing the gangplanks in position, or between the handles of hand trucks and fixed objects. This type of unsafe handling accounted for 7 percent of the accidents.

Other specific unsafe acts in this group included pulling hand trucks instead of pushing them, using equipment known to be defective, and using hammers instead of hand tools.

Assuming unsafe positions or postures. Failure to obey one of the basic safety rules, "Watch your step," was responsible for more accidents in the fertilizer industry than any other individual unsafe act. Over half of the accidents in the unsafe position or posture group, 19 percent of all accidents in the industry, and over 20 percent of all accidents attributed to unsafe acts in the superphosphate and dry-mixing departments were attributed to inattention to footing. Loose fertilizer or rock dust, pieces of scrap lumber or metal, rough floors and stairways were involved in many of the mishaps.

Incorrect lifting was responsible for approximately 5 percent of all accidents resulting from unsafe acts. Most of these accidents occurred when workmen attempted to lift objects while they were in awkward or stooped positions. Although it was sometimes very difficult to determine when objects were too heavy to be lifted by an individual employee, an attempt was made to exclude from the tabulation of unsafe acts those accidents which occurred because adequate assistance had not been provided—as it appeared that these actually resulted from unsafe working conditions rather than from unsafe acts.

Numerous accidents occurred because employees exposed themselves to pieces of superphosphate or other material falling or sliding from piles. Accidents of this type were most common in the superphosphate departments. Less common injuries producing unsafe acts in this group included walking or standing under suspended loads; entering enclosures which were unsafe because of high temperatures, gases, or other exposures; riding vehicles in unsafe positions; exposure on vehicle rights-of-way; running; and jumping from machines, railroad cars, ladders, or similar equipment.

Other Unsafe Acts. Operating or working at unsafe speeds caused about 12 percent of all accidents in the industry, and over 18 percent of all accidents in the dry-mixing departments. Vehicles, either hand or mechanically operated, were involved in a high proportion of these accidents.

Failure to wear personal safety equipment which had been provided, or failure to wear adequate clothing, was responsible for about 11 percent of the accidents. In the sulphuric-acid, the superphosphate, and the maintenance departments, failure to wear provided personal safety equipment was an especially noteworthy cause. Most of the instances resulted from the failure of employees to wear available goggles, respirators, and similar equipment.

Four percent of all accidents involving unsafe acts were the result of operating equipment without authority, starting or stopping equipment without giving warning signals, or failure to shut off or block equipment which was not being used.

Other unsafe acts which contributed to the occurrence of accidents were unsafe loading, placing, and mixing; working on moving or dangerous equipment; and fighting or quarreling.

more than any other type of skilled worker on the surveyed projects, averaging half of all skilled man-hours. The next most important trades, with respect to the proportion of time worked by skilled craftsmen, were painters (11 percent), bricklayers and masons (10 percent), plasterers (8 percent), and plumbers (6 percent). Total man-hour requirements, as well as the distribution by trades, varied considerably between areas for the same types of exterior wall material and for units in the same general cost classes. Within areas, the type of exterior wall material affected the distribution of man-hours more than any other factor.

The survey covered 2,521 one-family dwelling units situated in 344 different projects within the 18 areas.² All dwellings were started during the period September 1946–June 1947 and were completed prior to December 1947. Although different types and sizes of areas were surveyed, the findings submitted in this report should not be taken as indicative of the occupational distribution of hours on all residential building in the United States.

Variations in Occupational Distribution

Considerable variations were disclosed in the occupational distribution of man-hours required for the various projects, not only between areas but between projects within the same area. Type of exterior wall material was the main factor influencing the distribution.

Occupational distributions for the 2,521 units grouped according to the principal type of exterior wall material are presented in table 1. Three different categories were used in grouping the projects: *Frame*—All units with wood exterior

House Construction: Man-Hours by Occupation, 1946–47¹

MORE THAN 1,400 MAN-HOURS were required on the average to build a one-family house in 18 industrial areas surveyed by the Bureau of Labor Statistics during 1946–47. This man-hour requirement is probably high as a result of restrictive regulations such as the Government controls of building materials and types of construction, rising costs, and shortages of materials and skilled labor. More than three-fourths of the hours needed to build a dwelling unit during the survey period were worked by skilled craftsmen; the remaining hours were worked by semiskilled and unskilled workers, primarily construction laborers.

Five skilled trades (carpenters, painters, bricklayers and masons, plasterers, and plumbers) accounted for more than 65 percent of the average hours per unit. Carpenters were employed far

¹ Prepared by Edward M. Gordon of the Bureau's Branch of Construction Statistics.

² All of the places surveyed were industrial and large urban areas in which new residential construction was reasonably active. They were selected to give the best possible representation geographically and of types of housing, within the limits of the available resources. In all cases, the areas comprised entire counties or groups of counties; the projects studied were located in the central city (or cities) and also in the outlying suburban territory. The areas chosen were 18 of those covered by the Bureau's Area Housing Program. (See Monthly Labor Review, August 1948 (p. 161); Housing Statistics, 1946 and 1947—Sampling Methods and Survey Techniques.)

Actual projects studied within each area were selected from among all new dwellings placed under construction during the 3-month period, in such a way as to provide representation of the principal types of 1-family units being built. Man-hours worked by each occupational group were obtained from pay-roll records of contractors and subcontractors periodically during construction.

material, such as wood siding, wood shingles, boxing, etc. (Units with composition siding or com-

TABLE 1.—Occupational distribution of man-hours worked on new 1-family dwellings, by type of exterior wall material.

Occupation	Average man-hours by type of exterior wall material			
	Number	Percent of total	Number	Percent of total
			Total—All types ¹	Frame ²
Total—All occupations	1,420	100.0	1,440	100.0
Skilled workers ³	1,089	76.7	1,132	78.6
Bricklayers and masons	104	7.3	89	6.2
Carpenters	548	38.6	628	43.6
Construction machine operators	11	.8	17	1.2
Electricians	31	2.2	37	2.6
Lathers	34	2.4	20	1.4
Painters	121	8.5	125	8.7
Plasterers	84	5.9	50	3.5
Plumbers	70	4.9	66	4.6
Roofers	20	1.4	14	1.0
Sheet-metal workers	18	1.3	32	2.2
Tile setters	11	.8	7	.5
All others	37	2.6	47	3.1
Semiskilled workers ⁴	58	4.1	81	5.6
Helpers	47	3.3	68	4.7
Truck drivers	7	.5	9	.6
All others ⁵	4	.3	4	.3
Unskilled workers ⁶	257	18.1	197	13.7
Laborers	254	17.9	193	13.4
All others ⁷	3	.2	4	.3
Superintendents, clerks, and timekeepers	16	1.1	30	2.1
Average construction cost per unit ⁸	\$7,725		\$7,575	
		Masonry ⁹	Stucco ¹⁰	
Total—All occupations	1,630	100.0	1,300	100.0
Skilled workers ¹¹	1,189	73.0	1,000	77.7
Bricklayers and masons	238	14.6	40	3.1
Carpenters	536	32.9	504	38.8
Construction machine operators	8	.5	8	.6
Electricians	36	2.2	27	2.1
Lathers	16	1.0	53	4.1
Painters	114	7.0	121	9.3
Plasterers	72	4.4	112	8.6
Plumbers	78	4.8	66	5.1
Roofers	13	.8	27	2.1
Sheet-metal workers	33	2.0	3	.2
Tile setters	13	.8	13	1.0
All others	32	2.0	35	2.7
Semiskilled workers ¹²	87	5.3	26	2.0
Helpers	75	4.6	18	1.4
Truck drivers	7	.4	5	.4
All others ¹³	5	.3	3	.2
Unskilled workers ¹⁴	333	20.4	258	19.8
Laborers	326	20.0	255	19.6
All others ¹⁵	7	.4	3	.2
Superintendents, clerks, and timekeepers	21	1.3	7	.5
Average construction cost per unit ¹⁶	\$8,025		\$7,675	

¹ Based on 2,521 dwelling units in 344 projects located in 18 areas.

² Includes all units with wood exterior material; wood shingles, siding, boxing, etc.

³ Includes all units with masonry exterior: brick, tile, stone, concrete block, cinder block; includes brick veneer.

⁴ All stucco projects studied were located in the Los Angeles area.

⁵ Includes working foremen and apprentices.

⁶ Excludes apprentices.

⁷ Hod carriers, mortar mixers and similar occupations included in this category were classified as semiskilled workers in some areas, and as unskilled workers in other areas.

⁸ Includes guards and watchmen.

⁹ Construction cost includes cost of labor and materials and all subcontracted work; excludes land and development costs. It is shown only to indicate the cost class of units to which occupational distributions apply. It should not be used to make comparison between areas of average construction cost of units.

position shingle exteriors were excluded.
Masonry—All units with exterior wall material brick, tile, stone, concrete block, cinder block, etc. (Brick or stone veneer units were included.)
Stucco—Units with stucco exteriors. (All units of this type for which data are presented were located in the Los Angeles area.)

Total man-hours required, as shown in table 1, were lowest for stucco units, although these units were second highest with regard to average construction cost. The lower man-hours required for the stucco units possibly resulted, in part, from economies owing to the predominantly large-scale operations on the units studied.

Carpenters accounted for more man-hours than any other trade for all three types of exterior wall material.

TABLE 2.—Occupational distribution of man-hours worked on new 1-family dwellings,¹ by construction cost classification²

Occupation	Exterior wall material					
	Frame ³		Masonry ⁴		Stucco ⁵	
	Under \$5,250 to \$9,249	\$5,250 and over	Under \$5,250 to \$9,249	\$5,250 and over	Under \$5,250 to \$9,249	\$5,250 and over
Average man-hours per unit	1,100	1,340	1,920	960	1,490	2,160
Percentage distribution of man-hours worked						
Total—All occupations	100.0	100.0	100.0	100.0	100.0	100.0
Skilled workers ⁶	81.8	80.0	74.4	82.0	69.7	77.6
Bricklayers and masons	5.3	6.8	5.1	28.5	12.6	16.6
Carpenters	50.3	43.2	41.8	31.0	31.1	36.1
Construction machine operators	1.7	.9	1.7	.1	.6	.4
Electricians	2.4	2.7	2.5	2.8	2.2	2.1
Lathers	.9	1.7	1.0	.1	.9	1.3
Painters	7.3	9.2	8.2	6.9	6.9	7.2
Plasterers	4.0	3.8	3.1	2.8	4.8	4.0
Plumbers	4.9	5.1	3.0	6.5	4.6	4.9
Roofers	.8	.6	2.0	.7	.9	.8
Sheet-metal workers	1.3	2.3	2.4	.8	2.1	1.9
Tile setters	1.1	.5	.5	.1	.9	1.0
All others	1.8	3.2	3.1	1.7	2.1	1.7
Helpers and laborers ⁷	18.0	18.1	22.5	14.7	29.2	21.4
Superintendents, clerks, and timekeepers	.2	1.9	3.1	3.3	1.1	1.0
Average construction cost per unit ⁸	\$4,350	\$7,050	\$10,775	\$3,925	\$7,300	\$11,075

¹ Based on 2,521 dwelling units in 344 projects located in 18 areas.

² Construction cost includes cost of labor and materials and all subcontracted work; excludes land and development costs. It is shown only to indicate the cost class of units to which occupational distributions apply. It should not be used to make comparison between areas of average construction cost of units.

³ Includes all units with wood exterior material: wood shingles, siding, boxing, etc.

⁴ Includes all units with masonry exterior: brick, tile, stone, concrete block, cinder block; includes brick veneer.

⁵ All stucco projects studied were located in the Los Angeles area.

⁶ Includes working foremen and apprentices.

⁷ Includes truck drivers and other skilled and unskilled workers.

material. The relatively high proportion of carpenter hours for the masonry group (32.9 percent) was caused by the inclusion of masonry veneer units in this group. Bricklayers and masons, of course, formed a larger percentage for the masonry group (14.6) than for either of the other two.

Hours for lathers and plasterers were naturally high for stucco units, 12.7 percent, as contrasted with only 5.4 percent for masonry and 4.9 percent for frame.

Data for various construction cost classes are presented in table 2.³ Total man-hour requirements were higher on the average for the more expensive dwellings than for the others. Variations in occupational distribution between cost classes within the same type of material group showed no consistent pattern; differences in building practices may partially explain these variations.

In general, on the more expensive dwellings the

	Stucco ⁴
0	\$5,250 to \$9,249
1	1,280
0	1,700

¹ Construction cost includes the cost of labor and materials and all subcontracted work, but excludes land and development costs, such as for streets and sidewalks. Average construction cost figures are here presented only to indicate the cost class of the units to which the occupational distributions apply. They should not be used to make comparisons of average construction cost between areas.

man-hour requirements for the skilled trades were higher than for the other units, but the proportion of skilled to unskilled labor was lower. The latter is due to a more extensive use of unskilled labor on the higher-cost homes for site-preparation, landscaping, etc.

Considerable variation in both over-all man-hour requirements and in occupational distributions between units which were built in projects of different sizes is shown in table 3. The types of exterior wall material and the cost of the units appear to have more effect than the size of operation. However, the effects of large-scale operations on man-hour requirements is not conclusive because of the differences in cost and type of the dwellings included within each size class. The data do reveal that machines are used more often on large projects than on small projects. For frame units, the percentage of total hours for construction machine operators increased from 0.4 percent for 1 unit projects to 1.5 percent for projects of 25 or more units; for masonry units the proportion increased from 0.5 percent to 0.8 percent; and for stucco units from 0.1 percent to 0.6 percent.

TABLE 3.—Occupational distribution of man-hours worked on new 1-family dwellings,¹ by size of operation

Type of exterior wall material and size of operation	Average construction cost per unit ²	Average man-hours per unit	All workers	Percentage distribution of man-hours worked									Helpers and laborers ⁴	All other workers ⁴		
				Skilled workers												
				All skilled workers ³	Brick-layers and masons	Carpenters	Electricians	Painters	Plasterers	Plumbers	All others					
Frame ⁵ —All projects	\$7,575	1,440	100.0	78.6	6.2	43.6	2.6	8.7	3.5	4.6	9.4	19.3	2.1			
1-unit	6,625	1,400	100.0	84.1	6.1	51.5	2.7	9.1	3.5	5.2	6.0	15.5	.4			
2-4 units	8,220	1,410	100.0	77.5	5.6	45.2	3.2	8.0	3.2	5.2	7.1	19.5	3.0			
5-9 units	5,075	1,480	100.0	82.2	6.3	45.9	2.6	10.7	5.2	5.2	6.3	17.0	.8			
10-24 units	7,525	1,390	100.0	69.7	7.2	37.1	3.1	7.6	2.6	3.7	8.4	26.7	3.6			
25 or more units	7,850	1,510	100.0	79.5	6.0	42.0	2.2	8.7	3.5	4.2	12.9	18.3	2.2			
Masonry ⁶ —All projects	8,025	1,630	100.0	73.0	14.6	32.9	2.2	7.0	4.4	4.8	7.1	25.7	1.3			
1-unit	8,925	2,000	100.0	75.6	14.6	37.6	2.4	6.8	3.6	4.5	6.1	23.8	.6			
2-4 units	8,875	1,550	100.0	76.5	15.4	31.0	2.8	6.2	5.2	7.4	8.5	22.0	1.5			
5-9 units	9,450	1,840	100.0	78.2	17.8	35.2	1.8	6.4	4.5	4.3	8.2	21.4	.4			
10-24 units	7,450	1,620	100.0	65.5	14.2	28.5	1.9	7.4	3.7	4.0	5.8	31.3	3.2			
25 or more units	7,375	1,360	100.0	74.8	12.3	33.8	2.4	7.4	5.4	5.0	8.5	23.2	2.0			
Stucco ⁴ —All projects	7,675	1,300	100.0	77.7	3.1	38.8	2.1	9.3	8.6	5.1	10.7	21.8	.5			
1-unit	6,700	970	100.0	84.9	5.8	38.1	3.4	10.0	9.8	8.0	9.8	14.9	.2			
2-4 units	7,550	800	100.0	84.9	8.6	30.1	5.6	12.0	14.5	6.8	7.3	13.3	1.8			
5-9 units ⁷																
10-24 units ⁷																
25 or more units	7,675	1,300	100.0	77.6	3.1	38.8	2.1	9.3	8.5	5.1	10.7	21.9	.5			

¹ Based on 2,521 dwelling units in 344 projects located in 18 areas.

² Construction cost includes cost of labor and materials and all subcontracted work; excludes land and development costs. It is shown only to indicate the cost class of units to which occupational distributions apply. It should not be used to make comparison between areas of average construction cost units.

³ Includes working foremen and apprentices.

⁴ Includes truck drivers and other semiskilled and unskilled workers.

⁵ Includes superintendents, clerks, and timekeepers.

⁶ Includes all units with wood exterior materials: Wood shingles, siding, boxing, etc.

⁷ Includes all units with masonry exterior: Brick, tile, stone, concrete block, cinder block; includes brick veneer.

⁸ All stucco projects studied were located in the Los Angeles area.

⁹ No projects of this size studied.

Variations in Requirements Among Areas

Occupational distributions varied greatly among areas (see table 4). The high proportion of plasterers for units in the Chicago area, for example, reflects the provision in the building code for the city of Chicago, which required the use of three-coat wet plaster on dwellings which have plaster as the interior wall material. The greater relative volume of workers classified as helpers and laborers in such areas as St. Louis and Washing-

ton, D. C., may reflect a lack of extensive unionization of residential building trades in these places. The high proportion of laborer hours in the Mobile area probably was caused by the inclusion of a considerable number of units on which the owner himself performed much of the skilled work, with the assistance of one or more helpers. In other areas, such as Denver and Syracuse, differences in construction practices and differences in local customs with regard to the classification of workers may have contributed to the high proportion of laborers.

TABLE 4.—Occupational distribution of man-hours worked on new 1-family dwellings in selected areas

Type of exterior wall material and area	Average construction cost per unit ¹	Average man-hours per unit	Percentage distribution of man-hours worked										Helpers and laborers ²	All other workers ³		
			All workers	Skilled Workers												
				All skilled workers ⁴	Brick-layers and masons	Carpenters	Electricians	Painters	Plasterers	Plumbbers	All others					
Frame—All areas ⁵	\$7,575	1,440	100.0	78.6	6.2	43.6	2.6	8.7	3.5	4.6	9.4	19.3	1	H		
Boston	9,525	2,090	100.0	71.1	3.8	46.8	2.4	8.4	2.2	3.5	4.0	23.1	1	R		
Cleveland	7,275	1,500	100.0	83.2	11.4	40.9	3.2	9.0	3.3	4.9	10.5	14.0	1	U		
Detroit	6,575	1,130	100.0	79.1	5.1	39.9	2.3	10.6	4.8	7.0	9.4	19.7	1	T		
Indianapolis ⁶	6,650	1,430	100.0	80.5	7.6	44.9	2.4	8.0	4.7	5.9	7.0	17.3	1	A		
Lansing	7,175	1,120	100.0	86.7	8.5	46.1	3.7	11.4	2.8	5.4	8.8	9.0	1	E		
Milwaukee	7,575	1,200	100.0	84.7	12.2	40.7	3.1	10.5	4.2	3.6	10.4	14.0	1	T		
St. Louis	6,100	1,170	100.0	75.1	8.8	38.5	2.2	5.6	3.6	3.2	13.2	22.8	1	A		
Syracuse	9,300	1,670	100.0	63.9	5.7	34.7	2.4	8.9	2.7	4.0	5.5	31.0	1	M		
San Francisco	6,300	1,250	100.0	84.8	4.1	51.9	2.9	9.2	3.5	5.6	7.6	13.7	1	S		
Seattle—Tacoma	8,800	1,620	100.0	78.9	4.2	44.6	2.7	8.2	2.9	3.4	12.9	19.2	1	W		
Masonry—All areas ⁵	8,025	1,630	100.0	73.0	14.6	32.9	2.2	7.0	4.4	4.8	7.1	25.7	1	S		
Chicago	6,850	1,350	100.0	77.9	18.0	28.3	3.2	6.9	7.1	6.8	7.6	20.9	1	S		
Cleveland	11,700	2,830	100.0	78.2	19.7	40.3	1.2	6.4	2.0	3.2	5.4	21.5	1	T		
Detroit	8,250	1,400	100.0	80.2	15.2	33.4	2.5	9.6	4.9	6.0	8.6	19.2	1	I		
Milwaukee	9,000	1,480	100.0	81.9	22.3	30.2	2.1	9.8	3.3	4.7	9.5	16.3	1	per		
St. Louis	9,725	1,740	100.0	67.5	14.6	26.9	2.1	4.9	5.0	4.0	10.0	31.1	1	ind		
Washington, D. C.	7,675	1,710	100.0	57.8	11.4	27.1	1.5	4.9	4.6	3.6	4.7	40.4	1	and		
Mobile	7,100	2,070	100.0	64.7	11.6	32.7	1.2	5.8	4.0	3.5	5.9	33.3	1	for		
Denver	8,425	1,830	100.0	64.3	12.3	25.6	2.5	7.2	6.3	4.8	5.6	33.1	1	dir		
Seattle—Tacoma	8,825	1,320	100.0	81.1	7.4	39.5	3.5	9.1	3.8	4.6	13.2	17.7	1	ma		
Stucco ⁷	7,675	1,300	100.0	77.7	3.1	38.8	2.1	9.3	8.6	5.1	10.7	21.8	1	the		
Los Angeles	7,675	1,300	100.0	77.7	3.1	38.8	2.1	9.3	8.6	5.1	10.7	21.8	1	prod		

¹ Construction cost includes cost of labor and materials and all subcontracted work; excludes land and development costs. It is shown only to indicate the cost class of units to which occupational distributions apply. It should not be used to make comparison between areas of average construction cost of units.

² Includes working foremen and apprentices.

³ Includes truck drivers and other semiskilled and unskilled workers.

⁴ Includes superintendents, clerks, and timekeepers.

⁵ Includes all units with wood exterior materials: wood shingles, siding, boxing, etc. Includes units in 7 areas for which data are not shown separately.

⁶ Includes all units with masonry exterior: brick, tile, stone, concrete block, cinder block; includes brick veneer. Includes units in 9 areas for which data are not shown separately.

⁷ All stucco projects studied were located in the Los Angeles area.

Unit Man-Hour Requirements, Selected Machine Tools, 1939-47¹

IN 1947, AN AVERAGE of 3,200 man-hours per unit were expended in the manufacture of automatic screw machines. Turret lathes and horizontal boring machines required about 2,800 man-hours per unit. Man-hour requirements were much higher for these large and complicated machine tools than for any other types studied. Simpler tools, such as upright drills and surface grinders, required only about a tenth of the number of man-hours per unit needed for the more complicated tools.

The average number of man-hours expended for various selected types of machine tools in 1947 were as follows:

	Man-hours	Index of relative man-hours per unit (upright drill=100)
Horizontal boring machine	2,786	964
Radial drill	598	207
Upright drill	289	100
Engine lathe	1,106	383
Turret lathe	2,853	987
Automatic screw machine	3,215	1,112
Milling machine	1,740	602
Shaper	811	281
Surface grinder	351	121
Tool and cutter grinder	741	256

Indexes of total factory man-hours expended per unit for all reported machine tools combined² indicate that the 1947 unit man-hour averages were 10 percent higher than the averages for 1939, and 7 percent above those of 1945, the last year for which data were presented in the Bureau's initial report on man-hour requirements in this industry. The rise from 1945 to 1947, which was directly traceable to the sharply lowered volume of output, continued a trend begun in 1941, when man-hour requirements were 10 percent below those of 1939.

¹ Prepared by Benjamin D. Kaplan of the Bureau's Productivity and Technological Development Branch, under the direction of George E. Sodler. This report is the first of a series being prepared to provide current data for industries previously studied in the Bureau's Direct Productivity Reports program. For earlier data relating to the initial study covering the years 1939 to 1945, see Monthly Labor Review, August 1947: Man-Hours Expended per Unit, Selected Machine Tools, 1939-45.

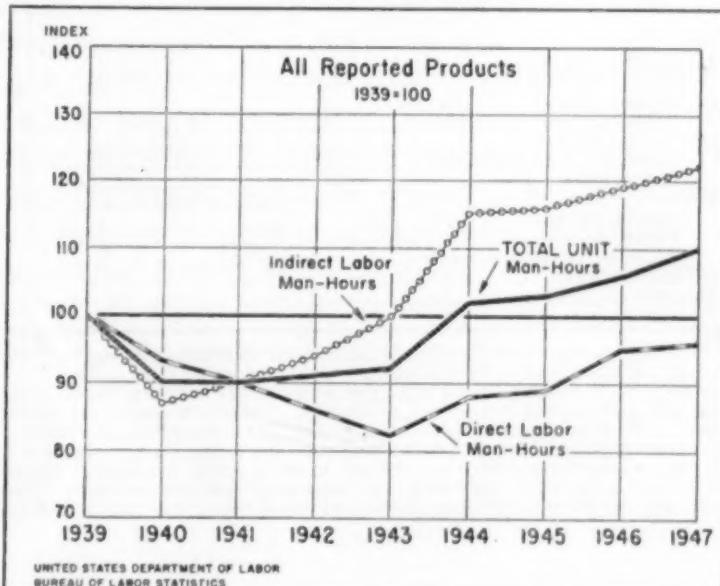
² Indexes prepared by the Bureau of Labor Statistics are based on reports from 45 firms which were responsible for well over half of the industry's output from August 1944 to July 1945. These companies submitted individual product schedules embodying man-hour requirement data for the years 1945 to 1947.

The index for direct man-hours increased 7 points from 1945 to 1946, and an additional point from 1946 to 1947, but the terminal-year index was still only 96 percent of the 1939 level. The index for indirect (overhead) labor man-hours, which in 1945 was 115 percent of the 1939 index increased an additional 6 points by 1947.

A number of factors led to a continued rise in unit man-hours during the reconversion period 1945 to 1947 practically all of which were directly traceable to the much lower volume of output. As demand declined after 1945 and war-surplus machines became available, machine-tool builders had to meet increasingly severe competition; more care was therefore put into design and processing of machines which necessitated higher man-hours per unit. In addition, many firms maintained personnel above current requirements in anticipation of a resumption of larger-scale activities. As production volume declined, many firms found it necessary to modify the standardized mass-production methods they had employed during the war, with a consequent rise in man-hours per unit.

Indirect man-hours rose somewhat less sharply during the 1945 to 1947 period than might have been expected from the marked decline in production. This was due in part to the elimination of wartime overhead functions no longer required (such as plant protection and, in some instances, production and materials controls), and in part to a reversion to the prewar practice of assigning job functions such as machine set-up or tool

Trends in Man-Hours Expended Per Unit, Selected Machine Tools



Help-
ers and
labor-
ers³
All
other
work-
ers

19.3
23.1
14.0
19.7
17.3
9.0
14.0
22.8
31.0
13.7
19.2

25.7
20.9
21.5
19.2
16.3
31.1
40.4
33.3
33.1
17.7

21.8
21.8

ingles, siding
wn separate
concrete block
or which da
area.

handling to machinists (direct labor) rather than to machine set-up men or toolroom men (indirect labor).

A few continuing technological improvements tended to prevent such severe rises as might have occurred otherwise. The improvements included even wider application of carbide-tipped tools, introduction of powered tools in some plants for work formerly done by hand, and purchase of a limited number of automatic, high-production machines.

Trends in unit labor requirements for individual types of machine tools were diverse both in direction and in degree. Between 1945 and 1948 indexes for boring machines, lathes, and shapers registered little change, as these tools were relatively stable in design, and were produced in nearly the same volume as in earlier years. Total factory man-hours per unit for drilling and milling machines declined significantly, because of increased output and the absence of any significant changes in either design or production methods.

TABLE 1.—*Unit man-hour trends¹ by type of machine tool and by type of labor*

Product	Indexes of man-hours per unit (1939=100)								Percent change	
	1940	1941	1942	1943	1944	1945	1946	1947	1945 to 1946	1946 to 1947
Total factory man-hours										
All reported products.....	90	90	91	92	102	103	106	110	+3	-
Boring machines.....	95	100	97	93	94	99	97	102	-2	-
Horizontal boring machines.....	84	87	80	81	87	93	95	104	+2	-
Drilling machines.....	84	79	75	72	81	82	77	78	-6	-
Single spindle upright drills.....	98	97	96	96	99	110	95	97	-14	-
Radial drills.....	81	75	71	68	77	77	74	76	-4	-
Lathes.....	91	91	95	94	120	113	117	126	+4	-
Engine lathes.....	96	95	93	100	108	101	105	111	+4	-
Turret lathes ²	55	81	85	88	114	117	117	125	0	+22
Milling machines.....	102	91	97	97	96	121	115	120	-5	-
Shapers.....	91	90	90	90	89	92	92	91	0	+2
Direct labor										
All reported products.....	93	90	86	82	88	89	95	96	+7	-
Boring machines.....	93	94	87	79	79	80	82	86	+2	-
Horizontal boring machines.....	85	89	82	81	85	90	92	96	+2	-
Drilling machines.....	89	84	78	72	77	79	76	77	-4	-
Single spindle upright drills.....	104	101	99	96	93	100	92	94	-8	-
Radial drills.....	86	80	74	68	74	75	74	75	-1	-
Lathes.....	90	91	93	87	107	102	113	117	+11	-
Engine lathes.....	98	97	93	92	95	92	96	104	+4	-
Turret lathes.....	82	79	81	77	95	95	105	106	+7	-
Milling machines.....	109	93	87	72	78	95	89	87	-6	-
Shapers.....	95	86	86	93	89	93	94	92	+1	-
Indirect (overhead) labor										
All reported products.....	87	90	94	100	115	116	119	122	+3	-
Boring machines.....	97	107	110	112	114	124	118	127	-5	-
Horizontal boring machines.....	83	85	77	79	88	97	101	116	+4	-
Drilling machines.....	69	63	65	72	92	90	79	79	-12	-
Single spindle upright drills.....	81	83	87	97	116	138	103	106	-25	-
Radial drills.....	67	61	62	68	89	83	74	77	-11	-
Lathes.....	92	93	98	106	140	129	136	143	+5	-
Engine lathes.....	95	94	94	113	126	115	119	122	+3	-
Turret lathes.....	91	84	94	108	152	152	147	162	-3	+18
Milling machines.....	99	90	103	106	107	136	131	142	-4	+1
Shapers.....	85	96	96	85	88	90	89	91	-1	+2

¹ These indexes show the average relationship between man-hours expended and units of product for the selected types of machine tools covered. The trends are determined by the combined influence of a large number of factors, including changes in equipment, production methods, management policies, skill, and efficiency of the work force, availability of materials, and others.

Unit man-hours include total factory man-hours, as generally classified by factory accountants, which are charged to the specified products. General administration, office, engineering, and sales employees are excluded. Direct and indirect labor man-hours, the sum of which constitutes unit man-hours,

are defined in a manner which conforms with general accounting practices of respondents.

The indexes for all reported products include data for the machines listed in table 2 and in addition for vertical boring mills, horizontal broaching machines, multiple spindle vertical drills, and planers. For the four types of machine tools not listed separately in these tables, individual trends could not be shown to avoid revealing the experiences of individual companies. Indexes for the grinding machines and automatic screw machines are not shown because the 1939 base values of 100 are not available for these products.

Manufacture of screw machines and most types of grinders, however, required an increasing number of man-hours per unit, which was due in part to the necessity for more careful finish and modifications in appearance and in operating characteristics (tables 1 and 2).

From 1946 to 1947, unit man-hours increased in the manufacture of all machine tools except shapers and internal grinders. The decrease for the latter tools was due chiefly to technological improvements. Sharp increases in the man-hour requirements for lathes and all grinders except the internal type were due in part to redesign of product and in part to unfamiliarity with the most efficient methods of producing the new models.

TABLE 2.—Percent change in unit man-hours, selected grinding machines, by type of labor

Product	Percent change in unit man-hours					
	Total factory		Direct labor		Indirect (overhead) labor	
	1945 to 1946	1946 to 1947	1945 to 1946	1946 to 1947	1945 to 1946	1946 to 1947
Grinding machines	+10	+2	+10	+6	+9	-6
Surface grinders	+18	+8	+21	+16	+8	-13
Tool and cutter grinders	+2	+20	-1	+16	+4	+22
Plain cylindrical external grinders						
Internal grinder	+15	+14	+10	+8	(0)	+19

Data not available.

Comparison of trends for plants classified according to size indicates that all size groups consumed more time per machine in 1947 than in 1945, but that the smallest plants (100 or fewer wage earners) continue to maintain to some degree the relative increase in efficiency developed during the war years. The group employing 251 to 1,000 wage earners also reported relatively favorable trends (table 3).

Indexes for firms classified according to method of wage payment show that establishments having some type of incentive system in effect experienced much more favorable trends during virtually the entire period 1939 to 1947 than did plants on an hourly wage basis. The variation was especially

marked during the years subsequent to 1943, when the supply of labor became extremely low. This would seem to indicate that an incentive wage system of some type generally tended to minimize the loss of efficiency incident to the wartime dilution of labor.

TABLE 3.—Unit man-hour trends, by size of plant and by type of labor

Plant size (number of wage earners)	Indexes of man-hours per unit (1939=100)							
	1940	1941	1942	1943	1944	1945	1946	1947
Total factory man-hours								
Over 1,000	98	97	102	102	112	117	119	124
251-1,000	88	91	84	84	89	87	91	93
101-250	82	82	83	84	100	101	111	111
100 or fewer	92	80	77	82	85	87	88	92
Direct labor								
Over 1,000	97	94	95	91	98	101	102	103
251-1,000	92	91	82	80	82	80	83	85
101-250	81	82	82	75	86	86	92	98
100 or fewer	94	84	82	86	87	80	91	93
Indirect labor								
Over 1,000	101	103	113	117	132	138	140	151
251-1,000	82	89	86	89	101	100	102	103
101-250	83	83	86	109	136	141	166	139
100 or fewer	91	76	70	78	83	79	78	83

Extremely wide variations appeared in the man-hour trends reported by individual establishments for the two periods, 1939 to 1945 and 1945 to 1947. Of the firms reporting for both 1939 and 1945, approximately a third reported increases, a third relatively little change, and a third decreases. From 1945 to 1947, however, half of all firms reported increases, and only a sixth decreases.

An analysis of the ratio of indirect (overhead) labor to total factory labor in the reporting establishments revealed a wide range. This was due to a number of reasons, including differences in manufacturing procedures, in the scale of operations, in nature of products manufactured, and in classification of accounts. More than half of the firms reported ratios of indirect labor to total labor falling between 21 and 50 percent; over two-thirds reported ratios between 21 percent and 60 percent; and less than a tenth reported ratios in excess of 60 percent.

Unit Man-Hour Requirements, Soap Manufacture, 1939-47³

IN 1947, DIRECT LABOR MAN-HOUR requirements averaged 0.35 for the manufacture of 100 pounds of product for all soap operations combined (excluding glycerin operations), or about 2 percent more than in 1939. Shortages of materials and labor and sharp fluctuations in production volume outweighed the favorable influence of the introduction of some new equipment and processes and the shift toward soap types with lower unit man-hour requirements. The reported data show that direct man-hours represent approximately a half of the factory total, including indirect (overhead) labor.⁴

The major expenditure of man-hours in soap making is associated with the processing of finished soaps from soap stock. In 1947, direct man-hour requirements for the processing of 100 pounds of finished soap were generally less than three-tenths of a man-hour, except in the case of toilet soap, which required almost seven-tenths of a man-hour. The latter was about three times the requirement for the processing of any other important type of soap, chiefly because of a larger number of hand operations, additional steps in the production cycle, and the necessity for manual inspection.

Saponification (preparation of soap stock) requires only a negligible amount of labor time, usually less than six-hundredths of a man-hour per 100 pounds (see table 1).

Marked differences existed in the number of man-hours required per unit in establishments of different size, with average man-hours decreasing as plant size increased. However, the differential in 1947 was not so great as in 1939, because of the generally less favorable productivity trends in the larger plants.

Variations on the level of man-hours per unit between groups of establishments classified according to geographic area did not appear to be significant or to follow any particular pattern.

³ Prepared by George E. Sadler of the Bureau's Productivity and Technological Development Branch, on the basis of the industry report (mimeographed) prepared by A. William Buschman.

⁴ Unit man-hour averages are based on reports from 22 companies, and cover operations in 33 individual establishments which in 1939 produced about 86 percent of all soap and glycerin made in the United States.

Trends in Unit Man-Hours

During the period studied, direct man-hour requirements per unit of output were relatively stable for all soap and glycerin operations combined. However, the levels in 1944 and 1947 were about 7 percent above the 1939 base; the 1947 requirements were only slightly higher than in 1939. The index for indirect man-hours of labor fluctuated much more sharply, rising to a higher peak (112.8 in 1940) and decreasing to lower levels (88.6 in 1942 and 90.1 in 1947). This sharper variation is to be expected in any industry.

TABLE 1.—Average direct man-hours per unit, soap and glycerin manufacturing operations.

Operation	Direct man-hours per unit					
	1939	1940	1942	1944	1946	1947
All soap-making operations	0.3457	0.3596	0.3423	0.3730	0.3713	0.3284
All saponification processes ¹	.0528	.0532	.0535	.0614	.0626	.0606
Full-boiled process	.0490	.0493	.0529	.0609	.0602	.0606
All end-product operations ²	.2920	.3064	.2888	.3116	.3087	.2946
Toilet soap	.6897	.7449	.6766	.7049	.6994	.6780
Spray, soap	.1987	.1995	.1810	.1719	.1669	.1784
Flakes, soap	.2627	.2603	.2409	.2509	.2341	.2238
Bar laundry soap	.1580	.2023	.2121	.2700	.2989	.2590
Lather cream	1.943	2.106	2.202	2.200	2.736	0.900
All glycerin recovery and refining	.4189	.4078	.4141	.4551	.4604	.4125
Glycerin recovery	.2086	.2710	.2742	.2952	.2984	.2900
Glycerin refining	.1503	.1368	.1399	.1599	.1620	.1300

¹ Includes full-boiled, fatty acid, and continuous saponification.

² Includes man-hours in all soap production operations from the completion of saponification extending through final wrapping and packing.

³ Data not collected from all plants for 1947.

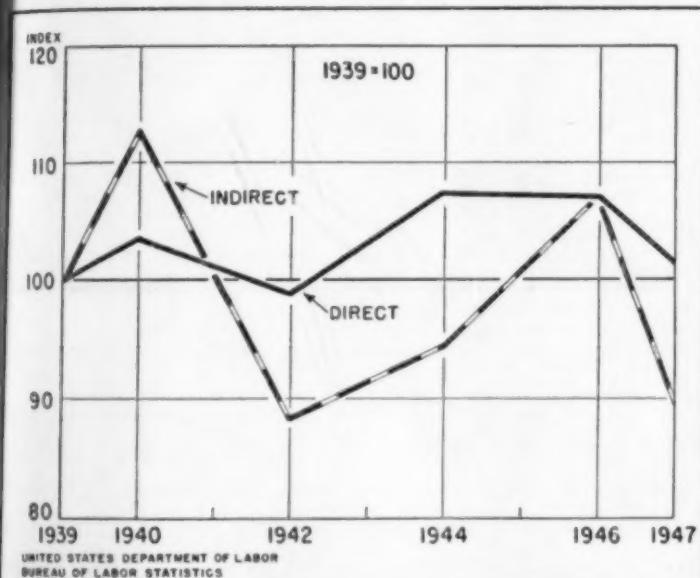
where the total amount of factory overhead labor is relatively constant regardless of volume of output. Indirect labor per unit declines as total production rises, but increases as total output decreases (see table 2).

Trends in labor requirements for individual operations varied extensively during the period covered. Substantial increases occurred for the saponification operations, for glycerin refining and recovery, for bar laundry soap making, and for lather cream production. In contrast, there were sizable reductions in the number of man-hours per 100 pounds of spray and flake soap, while the level for toilet soap changed very slightly. Changes in volume of production, shortages of materials, changes in production techniques, and the varying emphasis on different operations were all clearly reflected in the man-hour trends. For example, the significant reductions

In man-hours per 100 pounds of spray and flake soaps were due chiefly to large increases in volume resulting from utilization of new equipment and processes. The large rise for bar laundry soap was due to drastic curtailment in production of this type, with low utilization of plant capacity.

A number of industry-wide factors affecting production efficiency during the years covered by the report tended to have sharply divergent effects upon average man-hour requirements per unit of output. During the period of wartime expansion, shortages of materials, labor, and equipment outweighed the effect of measures taken to check inefficiency, and unit man-hour requirements rose, reaching a peak in the postwar year 1946. As many of these unfavorable operating conditions were improved, the full effect of the counteracting measures became evident, and the man-hour level for most operations declined sharply from 1946 to 1947.

Trends in Man-Hours Expended for the Manufacture of 100 Pounds of Soap and Glycerin Products



Effects of the favorable and unfavorable industry factors differed widely from company to company because of variations in plant size, integration of production, complexity of operations and equipment, and other conditions. For example, while increased wartime production enabled some

plants to operate continuously for the first time in their history, and therefore to reduce unit man-hour requirements materially, other plants operating at almost 100 percent of designed capacity were forced above the point of maximum efficiency. On the other hand, sharp reductions in production in 1946, together with continued acute material shortages, caused many plants to operate below the level of maximum efficiency.

TABLE 2.—*Unit man-hour trends, soap and glycerin manufacturing operations, by type of labor*

Operation	Indexes of man-hours per unit (1939=100)				
	1940	1942	1944	1946	1947
Direct labor					
All soap and glycerin operations.....	103.6	98.8	107.5	107.2	101.6
All soap-making operations:					
Soap operations only ¹	104.1	98.9	107.5	107.1	101.9
All saponification processes.....	100.7	101.3	116.2	118.6	106.6
Full-boiled process only.....	100.7	108.0	124.3	122.9	109.9
All end-product operations ²	104.6	98.6	106.4	105.4	101.1
Toilet soap.....	108.0	98.1	102.2	101.4	100.6
Spray, soap.....	100.4	91.1	86.5	85.5	89.9
Flakes, soap.....	99.1	91.7	95.5	89.1	88.3
Bar laundry soap.....	107.6	112.8	143.6	159.0	136.3
Lather cream.....	108.4	113.3	113.2	140.8	(*)
All glycerin recovery and refining.....	97.4	98.9	108.6	109.9	98.7
Glycerin recovery.....	100.9	102.1	109.9	111.1	97.7
Glycerin refining.....	91.0	93.1	106.4	107.8	100.4
Indirect labor					
All operations ⁴	112.8	88.6	94.5	107.2	90.1

¹ Includes saponification and end-product soap-making operations.

² Includes man-hours in all soap production operations after completion

of saponification, and extending through final wrapping and packing.

³ Data not collected from all plants for 1947.

⁴ Computed by applying the ratio of indirect to direct man-hours to the index of direct man-hours per unit and establishing an index of the result.

The most important influences tending to improve efficiency were, in general, increases in production volume, introduction of new equipment and new processes (especially common after the war's end), and a shift toward soap types with lower man-hour requirements. Influences tending to lower efficiency included lack of adequate replacement equipment during most of the period studied, expansion of operations in many establishments beyond the point of maximum efficiency, drastic shortages of fats, oils, and saponification materials, and continuing shortages of labor and supervisory personnel.

Wholesale Groceries: Wages in Large Cities, July 1948¹

IN 16 LARGE CITIES of the United States, straight-time hourly earnings of local-delivery truck drivers in wholesale grocery establishments ranged from \$1 to \$1.70 in July 1948; in 13 of these cities, their earnings equaled or exceeded \$1.25.² For order fillers, earnings levels generally were somewhat lower, with a range from \$1.10 to \$1.46, and for stockmen or stock helpers they were considerably lower with averages from 96 cents to \$1.44. Earnings of fork-lift and other power truckers, who are usually employed only by large establishments, were 1 cent below earnings of stockmen in 2 cities, but in the 6 other cities for which comparisons were possible they were from 6 to 12 cents higher.

Earnings levels, for the most part, were highest in San Francisco and New York. Truck drivers had the highest earnings in San Francisco (\$1.70), while in New York top averages for order fillers and stockmen (\$1.46 and \$1.44) were reported. In these 2 cities, as well as in Los Angeles and Chicago, truck drivers averaged \$1.50 an hour or more, and stockmen and order fillers equaled or exceeded \$1.30. For the latter 2 jobs, earnings averaged as much as \$1.30 in Pittsburgh, but only the order fillers attained this level in Detroit and Philadelphia. Lowest earnings levels among all cities included in the study were found in Baltimore and Washington, where the averages for the 3 jobs ranged from 96 cents to \$1.15 an hour.

Wages increased generally during the year preceding the current study; there were wide vari-

ations by city, however, for each occupational group. The most substantial gains were made by order fillers, whose typical increases ranged from 10 to 15 percent in a majority of the cities, compared to increases for stockmen ranging from 5 to 10 percent in half the cities. Averages for truck drivers had changed less than 5 percent over the 1-year period in about half the cities, though in 5 others the increases ranged from 11 percent to about 34 percent. Average increases of at least 10 percent for all 3 jobs were reported in

Straight-time average hourly earnings¹ of men, selected occupations in wholesale grocery establishments in 16 cities, July of 1947 and 1948

Cities	Order fillers			Stockmen or stock helpers			Truck drivers, local delivery			Truck- ers, power
	July 1948	July 1947	Per- cent in- crease	July 1948	July 1947	Per- cent in- crease	July 1948	July 1947	Per- cent in- crease	
Baltimore	\$1.11	\$1.01	9.9	\$0.96	\$0.96	0	\$1.15	\$1.10	4.5	(*)
Boston	1.28	1.16	10.3	1.28	1.14	12.3	1.35	(*)	—	\$1.34
Buffalo	1.16	1.05	10.5	1.15	1.05	9.5	1.25	1.16	7.8	1.14
Chicago	1.38	1.25	10.4	1.34	1.23	8.9	1.51	1.44	4.9	(*)
Cincinnati	1.18	1.05	12.4	1.08	.97	11.3	1.30	1.08	20.4	(*)
Cleveland	1.23	1.09	12.8	1.18	1.08	9.3	1.44	1.35	6.7	(*)
Detroit	1.30	1.20	8.3	1.18	1.08	9.3	1.40	1.28	9.4	1.30
Los Angeles	(*)	1.27	—	1.38	1.40	-1.4	1.53	1.47	4.1	1.45
Milwaukee	1.24	1.06	17.0	1.13	.97	16.5	1.26	1.11	13.5	(*)
Minneapolis										
St. Paul	1.11	1.07	3.7	1.08	1.05	2.9	1.17	1.14	2.6	1.15
New York	1.46	1.36	7.4	1.44	1.33	8.3	1.56	1.57	-0.6	1.56
Philadelphia	1.45	1.18	22.9	1.09	1.03	5.8	1.29	1.29	0	1.08
Pittsburgh	1.37	1.24	10.5	1.31	1.18	11.0	1.49	1.34	11.2	1.41
St. Louis	1.24	1.10	12.7	1.15	.98	17.3	1.35	1.01	33.7	(*)
San Francisco	1.38	1.28	7.8	1.39	1.28	8.6	1.70	1.46	16.4	(*)
Washington	1.10	.99	11.1	.97	.89	9.0	1.00	.97	3.1	(*)

¹ Excludes premium pay for overtime and night work.

² This occupation was not included in the July 1947 study.

³ Insufficient number of workers to justify presentation of an average.

Boston, Cincinnati, Milwaukee, Pittsburgh, and St. Louis. In contrast, earnings in the selected jobs on a city-wide basis in Baltimore, Detroit, Los Angeles, Minneapolis, and New York did not increase as much as 10 percent. Slight decreases occurred for stockmen in Los Angeles and for local-delivery truck drivers in New York; however, these declines in earnings probably resulted from factors such as increases in labor force and turn-over in employment rather than from actual downward adjustments in basic rates.

¹ Prepared in the Bureau's Division of Wage Analysis. Greater detail on wages and wage practices for each city included in the study is available on request.

² The wage information here summarized refers to average hourly earnings (excluding premium pay for overtime and night work) in selected jobs. The study, made by the Bureau of Labor Statistics, included general-line wholesale grocery establishments and grocery chain-store warehouses engaged in wholesale distribution of merchandise to retail outlets, and employing 8 or more workers. The Southeast and Southwest regions were not represented among the 16 cities covered by the study.

Power Laundries: Wages in July 1948¹

AVERAGE WAGES OF women power-laundry workers employed on flatwork finishing machines ranged from 37 to 91 cents an hour² among 33 large cities surveyed in July 1948.³ The hourly pay of these workers, who represented the largest occupational group in power laundries, averaged less than 65 cents in 17 cities. Laundry bundle wrappers in almost as many cities averaged less than 65 cents, and in 8 cities both these jobs were below the 50-cent level. In 24 of the 33 cities, the average hourly pay of markers, and in 22 and 19 cities, respectively, that of shirt pressers (machine) and retail receiving clerks amounted to 65 cents or more.

Hourly rates of men workers in 3 jobs in which they were typically employed were seldom below 65 cents on a city-wide basis. Of these occupations, extractor operators, generally paid the lowest rates, averaged \$1 an hour or more in only 8 cities; this level of rates was exceeded in 18 cities by machine washers and in 20 cities by firemen of stationary boilers.

Highest earnings levels were reported in Pacific Coast cities. Among the 4 large cities studied in that region, flatwork finishers in Los Angeles, with an 83-cent average, were the only occupational group having an earnings level below 90 cents an hour. In Seattle and San Francisco, earnings of women markers, bundle wrappers, and retail receiving clerks equaled \$1 or more. The highest job average for women was \$1.08, reported for markers in San Francisco. Men, on the other hand, averaged at least \$1.25 in Portland, San Francisco, and Seattle, in the 3 jobs studied. Firemen in San Francisco received the top average for men's jobs—\$1.90. Cities in which earnings ranked next to those in the Pacific Coast region for one or more jobs (men's or women's) included Chicago, Detroit, New York, Newark, and Toledo. In contrast with the Pacific Coast region, all city job averages which were below 50 cents an hour

¹ Prepared in the Bureau's Division of Wage Analysis. Data for a limited number of occupations were collected by field representatives under the direction of the Bureau's regional wage analysts. Greater detail on wages and wage practices for each city in the current article is available on request.

² Exclusive of premium payments for overtime and night work.

³ Approximately 115,000 workers were employed in power laundries in the 33 cities in July 1948, exclusive of establishments with less than 21 workers, which were not included in the current study.

for women and below 75 cents for men were found in either the Southeast or Southwest region. Atlanta, Birmingham, Jacksonville, and Memphis ranked lowest for one or more jobs, with variations in earnings levels of only a few cents among these cities.

Straight-time average hourly earnings,¹ selected occupations in power laundries in 33 large cities, July 1948

Wage area	Men			Women				
	Extractor operators	Firemen, stationery, boilerer	Washers, machine	Clerks, retail receiving	Finishers, flatwork, machine	Markers	Pressers, shirt, machine	Wrappers, bundle
Atlanta	\$0.65	\$0.67	\$0.78	\$0.65	\$0.37	\$0.49	\$0.49	\$0.39
Baltimore	.76	.94	.88	.62	.58	.62	.62	.57
Birmingham	.58	.65	.81	.57	.37	.52	.46	.40
Boston	.95	1.21	1.04	.73	.66	.71	.86	.66
Buffalo	.92	1.06	1.00	.68	.69	.68	.79	.68
Chicago	1.06	1.16	1.24	(?)	.71	.82	.95	.76
Cincinnati	.78	1.09	.88	.62	.66	.66	.73	.67
Cleveland	.85	1.06	.97	.71	.66	.76	.85	.66
Dallas	.68	.92	.85	.58	.44	.61	.55	.49
Denver	.79	.90	.97	.63	.56	.67	.63	.60
Detroit	1.02	1.34	1.18	.86	.78	.87	.94	.78
Houston	.71	1.03	.97	.60	.43	.60	.55	.47
Indianapolis	.89	.95	1.09	.71	.62	.73	.73	.73
Jacksonville	.65	.79	.84	.64	.38	.51	.43	.42
Kansas City	.76	1.14	.85	.78	.55	.65	.62	.56
Los Angeles	1.11	(?)	1.24	.93	.83	.97	.96	.93
Louisville	.79	1.07	1.02	.66	.57	.67	.74	.56
Memphis	.80	(?)	.66	.56	.39	.46	.48	.37
Milwaukee	.94	1.25	1.20	.73	.69	.75	.77	.72
Minneapolis-St. Paul	.87	1.16	1.10	.71	.66	.72	.71	.68
Newark-Jersey City	.92	1.22	1.00	.85	.71	.91	.85	.78
New Orleans	.65	(?)	.94	.61	.46	.57	.58	.46
New York	1.00	1.36	1.22	(?)	.72	.85	.84	.81
Philadelphia	.86	1.06	1.03	.73	.63	.70	.74	.66
Pittsburgh	.87	1.14	1.05	.64	.62	.70	.72	.62
Portland (Oreg.)	1.25	1.62	1.41	.92	.91	.95	.94	.94
Providence	.81	1.01	1.06	.68	.66	.86	.85	.77
Richmond	.66	.78	.73	.65	.44	.50	.59	.44
St. Louis	.78	.82	.99	(?)	.55	.66	.69	.58
San Francisco	1.27	1.90	1.38	1.00	.90	1.08	.99	1.05
Seattle	1.28	1.55	1.48	1.06	.91	1.04	.95	1.00
Toledo	1.02	1.21	1.35	(?)	.78	.89	.82	.87
Washington	.79	.85	.90	.75	.62	.71	.71	.61

¹ Excludes premium pay for overtime and night work.

² Insufficient number of workers to justify presentation of an average.

Comparisons of earnings in the July 1948 study with those reported the same month in 1947⁴ revealed that increases had occurred in most job averages in nearly all cities. Women flatwork finishers (machine), and men extractor operators and washers (machine) showed increases, in approximately half of the cities, amounting to at least 5 percent, with more than four-fifths of the increases ranging from 5 to 15 percent. For

⁴ The 1947 study included establishments with 8 or more workers. Since the estimated employment in establishments with 8 to 20 workers accounted for less than 4 percent of the total power-laundry employment in the 33 cities, their exclusion from the 1948 study would have little if any influence upon the job averages in which comparisons were made.

Women bundle wrappers and shirt pressers, the increases equaled or exceeded 5 percent in 22 and 26 of the cities, respectively, and more than two-thirds of these increases ranged from 5 to 15 percent. Although earnings were relatively low in Birmingham, this was the only city in which the increases in all five of these jobs exceeded 10 percent.

D. C. Family Income in Relation to BLS Family Budget¹

IN 1947, ABOUT 34 PERCENT of the families composed of a husband, wife, and two children under 18, in the Washington, D. C., area, had incomes below \$3,458, the amount which would have been required at June 1947 prices to maintain such a family at the "modest but adequate" level of living described by the Bureau of Labor Statistics City Worker's Family Budget.² Families of this composition (husband, wife, and two children), which most nearly resemble the "budget family," accounted for about 13½ percent of all families of two or more in the Washington area. About 29 percent of all four-person families, with husband and wife and two other members at all ages, had incomes below the budget level.

A recent survey of consumer income in Washington, D. C., conducted by the Bureau of the Census, provided the opportunity to compare 1947 family incomes with the cost of the city worker's family budget at June 1947 prices. Using the ratios of an equivalent level of living for different size family groups, as was done in a similar comparison for Indianapolis,³ the budget cost was estimated for single persons and for husband-wife families of different sizes. Previously unpublished income size distributions for husband-wife families were obtained from the Census. Husband-wife families, with or without other members, represent about three-fifths of all families in the Washington area. Of these families, 28 percent had incomes in 1947 too low to maintain the budget level of living. Although the level of family income in Washington rose as family size increased from two

to five persons, a greater proportion of families were below the budget line in each successively larger family size group. Husband-wife families with incomes insufficient to maintain the budget level ranged from 22 percent of all two-person families to about 34 percent for families of five persons and almost 50 percent for families of six or more. Single persons fared worse than families on the average, 34 percent having incomes below budget requirements.

How closely conclusions based on such estimates actually reflect conditions in the Washington area is difficult to state. The exact budget cost is available for only one type and size of family; the ratio scale used to estimate budget levels for other size families implies an averaging of all types of families in each size group (e. g., the very young couples and the very old couples among two-person families). The income distributions, also, include families of varying types, each of which would require a separate budget to attain the same degree of well-being. A comparison of the percent of "budget families" (working husband, wife not gainfully employed and two children under 18) with incomes below the budget level (34 percent), with the percent of all four-person husband-wife families (possibly having more than one earner) with incomes below the budget level (29 percent), suggests that a more exact comparison of incomes and expenditures for specific family types might show even more than 28 percent of these Washington families unable to maintain the budget level of living on current incomes. Yet the reverse might be true for the single persons group, in which, no doubt, some unemployed persons contribute to the low income level of the group.

This very inexactitude demonstrates the need for the development of budgets describing a specified level of living for representative types of each family size and for the availability of reliable income data for families of varying composition. Among all four-person, husband-wife families will be found many having more than one earner; proportionately fewer multiple-earner families will be found among four-person, husband-wife

¹ By Abner Hurwitz, of the Bureau's Division of Prices and Cost of Living.

² See The City Worker's Family Budget, in the February 1948 issue of the Monthly Labor Review.

³ See Family Incomes and Cost of Family Budgets, op. cit.

⁴ See Workers Budgets in the United States, BLS Bulletin 927, Foreword (pp. iii-v).

of families containing two minor children than in four-person families generally. As a consequence, the average income of the families with children will be lower than the average for all four-person families, as the Washington figures show. Other factors, such as the possibility of greater earnings individuals in the older families, may add further this difference.

Distribution of husband-wife families and single persons in the Washington Area by 1947 total money income and family size in relation to the C. W. F. B. for June 1947

Item	Single persons	Husband-wife families of					
		2 persons		4-persons		5 persons	6 or more persons
		2 persons	3 persons	2 children	Total		
Percent of all families and single persons ¹	28.7	19.7	16.8	9.6	13.2	6.6	4.8
Total money income:							
Under \$1,000.....	17.9	3.8	2.0	3.4	2.4	1.1	1.5
\$1,000 to \$2,000.....	22.3	11.0	7.2	4.2	3.7	6.4	3.5
\$2,000 to \$3,000.....	34.2	18.2	17.0	14.2	12.4	12.8	16.2
\$3,000 to \$4,000.....	14.0	18.7	21.3	21.6	18.9	14.6	20.2
\$4,000 to \$5,000.....	5.7	16.7	15.9	17.1	17.6	16.4	13.3
\$5,000 to \$7,500.....	3.6	21.7	25.0	26.8	29.2	30.2	25.6
\$7,500 and over.....	2.3	9.9	11.6	12.7	15.8	18.5	19.7
Total.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Median income.....	\$2,261	\$3,905	\$4,171	\$4,314	\$4,661	\$4,903	\$4,604
Estimated cost of budget.....	1,769	2,366	2,972	3,458	3,908	4,512	
Estimated percent below budget level.....	34	22	26	34	29	34	49

Families not included in this tabulation accounted for 10.2 percent of all families and single persons.

By the same token, a budget tailored to provide specified level of living for a family composed of husband, wife, and two children, in which only the husband is gainfully employed, will not necessarily fit other family types of the same size. If the wife is employed, it usually requires additions to the family budget for more meals away from home, more and better clothing, additional transportation, and the payment for household services normally performed by the housewife. If adults replace the children in the family make-up, additions to almost every category of consumption items are required.

For families in other size groups, even greater ranges of incomes and budget needs may be apparent. The distribution of incomes of all two-person families combined is not representative of incomes of young employed couples or of aged couples on relief, at the ends of the range, nor will the costs of maintaining either of these two-family

types adequately measure the average cost for all two-person families.

The need for sufficient information on the cost of budgets for families of different size and composition, and matching distributions of family income, may not be satisfied for many years to come. It is of interest, therefore, to make use of additional data, however fragmentary, as they become available, to measure roughly the adequacy of incomes to support a satisfactory level of living in a current situation.

Personnel Practices in Unionized Offices

ANALYSIS OF 50 COLLECTIVE BARGAINING AGREEMENTS covering office workers shows that they did not provide for the closed shop when the contracts were signed in 1946 and 1947. Therefore, the closed-shop ban in the Labor Management Relations Act of 1947 has not affected the prevailing practice in the sample group of offices represented. The same study, which was made by the American Management Association,¹ discloses a variety of facts concerning the predominant clauses governing union security, wages and hours, and fringe issues. The AMA's earlier survey² of 300 contracts led to the present analysis of 50. These 50 contracts were negotiated with 31 national and international unions and a large number of unions representing employees in a single company or group of companies.

Union Security Provisions

Although, as already stated, the closed shop is not an issue in the contracts covered, the provisions of the Taft-Hartley Act which regulate all other forms of the compulsory shop directly affect

¹ Data are from Survey of Personnel Practices in Unionized Offices. New York, American Management Association, 1948 (Research Report No. 13.) The survey covers jobs that are more or less common to many offices. It excludes categories of supervisors and other management personnel that are usually excluded from bargaining units of rank-and-file office employees and which the Labor Management Relations Act now prohibits from inclusion in such units.

² Collective Bargaining in the Office. New York, American Management Association, 1948. (Research Report No. 12.)

collective bargaining in offices. Almost a fourth of the AMA sample contracts contain union-shop clauses whereby new employees are required to join the union after completion of probation. About half of the contracts provide for maintenance of membership, under which all present union members and those who join subsequently must continue their membership for the duration of the contract. However, escape clauses modify the majority of the maintenance of membership clauses. Most frequently, the escape period specified is 15 days from the signing of the contract.

Some form of check-off is prescribed in about half of the 50 contracts studied. Provisions on this point are about equally divided between automatic pay-roll deductions of union dues by the employer and deduction upon voluntary written authorization by the employee. The automatic form of check-off, currently prohibited by the Taft-Hartley law, is three times as prevalent in the manufacturing offices as in the commercial firms.

A no-strike pledge is virtually universal (98 percent of the contracts). It is qualified in 10 percent of the contracts by statements that management will hold the union responsible for authorized strikes. Thus, the union is protected against damage claims in wildcat strikes.

Restrictions on union activity occur in half the contracts. But the restrictions on such activity on company time and property is offset in 84 percent by the grant of permission to use company bulletin boards. The material to be posted is usually limited to notices that deal with union meetings, elections, and social affairs. Posting of political material is almost always prohibited.

Salaries and Hours of Work

Existing rates of pay are continued in 10 percent of the 50 contracts, most of which are effective from 1946 to 1948 or from 1947 to 1949. A salary increase is provided in 44 percent; almost the same proportion give no indication as to whether the salary rates are changed. Cost-of-living allowances are granted in 2 percent of the contracts, and in 4 percent, such allowances are subject to specified changes in the consumers' price index of the United States Bureau of Labor Statistics. Reopening clauses (usually on salaries only) are written into about a fourth of the contracts; they

are usually contingent upon a specified condition such as a rate negotiation by a competitor or cost-of-living increase.

Base salary differentials are established by a job evaluation and classification plan in 84 percent of the 50 contracts. Job evaluations for the purpose of establishing future salary rates are proposed in an additional 12 percent.

Only 6 percent of the contracts establish a single rate for each job classification. The overwhelming majority in the sample studied have a rate range (rather than a single rate structure), for each job classification but only 40 percent mention the basis for advancement through these rate ranges. Commercial office contracts specify the basis for within-grade increases nearly twice as frequently as those for manufacturing offices. However, where the subject is covered in manufacturing firms, merit increases predominate. In the latter instance, automatic length-of-service increases are not provided; in some cases, a compromise arrangement is made whereby the employee receives an automatic salary increase until he reaches the midpoint of the rate range and merit increases thereafter.

The 40-hour week is specified in 68 percent of the contracts—80 percent in manufacturing and slightly over 50 percent in commercial offices. Shorter workweeks are provided in the other contracts. In agreeing to the weekly schedule, the employer does not guarantee that each employee will be given the scheduled number of hours of work, and some contracts state this in specific clauses.

The 8-hour day is standard in 64 percent of the contracts and the 7-hour day in an additional 10 percent. Over 80 percent of the contracts do not mention the lunch period but, where fixed, the common allowance is an hour. A 5½-day week is mentioned in 24 percent of the contracts covering commercial offices and in 8 percent of those for factory offices. The 6-day schedule occurs in 1 percent of the factory offices and not at all in the commercial offices. Where the workweek is touched upon, the 5-day week is most common.

About 60 percent of the contracts which prescribe a 40-hour week also provide time and a half pay for daily or weekly overtime. In 27 percent, the overtime provision is for time and a half after 40 hours a week and in 2.5 percent after 8 hours in a day. Ten percent of the contracts

increase the premium rate to double pay after the first 3 hours over 8 hours in a day.

In contracts fixing the workweek at less than 40 hours, about half, amounting to 10 percent of the total 50 contracts, establish premium pay at time and a half for all hours worked in excess of the regular weekly schedule. Others either do not authorize any pay or specify regular rates for hours between the scheduled workweek and 40 hours; thereafter, the rate is time and a half, in conformity with the requirements of the Fair Labor Standards Act. Compensatory time off instead of overtime pay is a popular practice: 2 percent of the contracts permit it; 4 percent prohibit it; and 12 percent allow it, if agreeable to the supervisor and the employee.

Fringe Issues Under Contracts

Two weeks' vacation after one or more years of service is the predominant provision. Only 20 percent of the manufacturing companies allow additional vacations for longer service, but 84 percent of the commercial firms make additional allowances of this kind.

Six paid holidays are specified in half of the contracts. Highest allowances are 8 holidays in the manufacturing group and 11 in commercial offices. In 12 percent of the total, no holiday clause is included.

Paid sick leave provisions are omitted from 44 percent of the contracts, and this omission is twice as frequent in manufacturing offices as in the others. Where the amount of sick leave is specified, the ceiling is 2 weeks a year. Six percent of the contracts (all nonmanufacturing) base sick leave allowances on length of service, the minimum being 2 weeks after 1 year's service.

Extended leave is usually provided for in the contracts although it may not be covered in a separate clause. The most prevalent reason for granting such leave is to permit an employee to hold union office. This is mentioned in 34 percent of the sample of 50 contracts—three times as often in manufacturing as in commercial firms. The maximum length of leave is not specified in 26 percent of the contracts. One year is the most common limitation (in factory offices only, however); 3 months and 6 months are mentioned equally often.

About half of the contracts make some reference to group insurance. None of them refers to the

union as a party in developing or administering the plan. Health and accident and hospitalization insurance provisions account for almost 12 percent of the total insurance clauses that occur.

In the AMA sample, 42 percent of the contracts state that seniority is to be governed by length of service with the company. However, 22 percent of the clauses define seniority as length of service within departments. As a result, a relatively long-term employee may have a lower position on the seniority list than a person who is newer in service with the company but has had longer service in the department.

Under 46 percent of the contracts, seniority is to govern promotions "where ability and qualifications of candidates are 'relatively equal.'" Almost 40 percent require the posting of job vacancies on bulletin boards. A trial period before promotion becomes effective is required in 36 percent of the contracts. According to the AMA, such a provision is sometimes included because seniority is important in the selection of candidates for promotion. This provision is three times more frequent in the commercial firm contracts than in the factory contracts surveyed. However, the safeguard itself raises other problems. In 24 percent of the contracts, the trial period provision is accompanied by another whereby the employee who fails to qualify in the new job must be returned to his former job, or to one of comparable pay and status. Four percent of the contracts permit the employee to choose between the new job and the old (or an equivalent) at the end of the trial period.

Many but not all contracts state management's right to discharge employees. Separate clauses on this subject appear in 42 percent of the sample but no reasons for discharge are listed other than "just cause." However, other clauses may specify causes for discharge. Advance notice to the employee is required in 16 percent of the contracts and such notice to the union is required in 12 percent.

Contracts invariably state management's absolute right to discharge employees during probation; 84 percent establish a probationary period (most commonly 3 months) for new employees.

Severance pay is mentioned in 28 percent of the contracts. Twelve percent provide 1 week's extra salary; 4 percent, 2 weeks'; and 12 percent, a sliding scale according to years of service (1 week's

salary for each year of service up to a specified maximum being the method in many contracts). Employers have the option of giving advance notice of termination instead of severance pay under 4 percent of the contracts. Eight percent provide for severance pay on lay-off; the majority, however, require the payment only on final separation of the employee from the pay roll.

A well-defined day-off provision, as differentiated from a final termination of employment, is incorporated in 84 percent of the AMA sample. Under 38 percent, no new employees may be hired until all eligible employees on lay-off have been reinstated. Seniority is mentioned in 60 percent as a major factor in selecting employees who are to be laid off. Eight percent of the contracts specify union-management consultation on the order of lay-off; 22 percent require other action before a lay-off affects regular employees (for example, overtime may be eliminated). To safeguard against the break-down in operations that might result from the automatic observance of seniority, some contracts allow employers to retain certain employees regardless of seniority status. Almost a fourth of the total provide for advance notice to employees before they are laid off: 2 percent specify that the salary equivalent must be paid for the period of notice, if it is inconvenient to the employer to give the required advance notice. Notification periods are 48 hours, 1 week, and 2 weeks.

Clauses on the adjustment of grievances, are universal and many of them are general in nature. No definition of grievance is given in 30 percent of the contracts; in 16 percent it is stated that any complaint may be considered a grievance; and 54 percent strictly limit grievances to matters arising out of the interpretation or application of the contract. In 30 percent of the contracts, the matter at issue must have occurred within a specified time (1 week and 30 days are periods most frequently mentioned) of presentation as a grievance.

Steps in the grievance procedure are limited to three in 44 percent of the contracts, to four in 22 percent, and to two in 20 percent. In 10 percent there are five steps and in 4 percent, seven.

A provision for arbitration of grievances (which are not settled by the company's grievance procedure) is made in all but 18 percent of the AMA sample. Arbitration provisions are lacking in

three times as many commercial firm contracts as in those covering factory office workers. Sixty-two percent specifically state that the arbitrator's decision shall be binding on both parties. Arbitration is limited to grievances concerning the interpretation or operation of the contract in half of the sample. Such clauses emphasize that the arbitrator may not change or modify the terms of the contract.

Case Studies in Industrial Peace

CAUSES OF INDUSTRIAL PEACE are being examined in a series of 15 case studies of individual companies and their bargaining agents, by a special committee¹ of the National Planning Association. In presenting the second report in this series, the association suggests that the example given of progress toward industrial peace may indicate a trend in labor relations of mass-production industries. Thus far, the results have been issued of case studies on relations between (1) the Libbey-Owens-Ford Glass Co. and the Federation of Glass, Ceramic and Silica Sand Workers of America (CIO), and (2) the Crown Zellerbach Corp. and two unions—the International Brotherhood of Pulp, Sulphite and Paper Mill Workers and the International Brotherhood of Paper Makers. Summaries of both studies are given in the present article.

Libbey-Owens-Ford Glass Co. and Glass Workers²

Unanimous committee support was given to a broad statement on industrial relations in the Libbey-Owens-Ford Glass Co.: "Constructive industrial peace can be achieved in American business when companies and unions cooperate

¹ The NPA Committee on the Causes of Industrial Peace under Collective Bargaining is composed of Clinton S. Golden, chairman, and 28 other members, who represent business, labor, and the professions.

² National Planning Association. Causes of Industrial Peace Under Collective Bargaining—Case Study No. 2, The Libbey-Owens-Ford Glass Co. and the Federation of Glass, Ceramic and Silica Sand Workers of America, by Frederick H. Harbison and King Carr, Washington, 1948; press release of November 1, 1948.

contracts and compromise intelligently where their interests are in common and conflict." The report was based on a first-hand analysis of the 15-year relationship between the management, which employs about 500 hourly rated workers in 8 plants, and the Federation of Glass, Ceramic and Silica Sand Workers of America, a union having 30,000 members. Commenting on the results, the NPA stated that they offer evidence of the truth of one of the committee's basic premises—"that the lack of strikes is not the only criterion of good industrial relations, nor is their occasional occurrence an absolute proof that relations are bad. * * * Actually there may be fewer unfavorable consequences from spectacular stoppages, occurring from time to time, than from the steady impairment and deterioration of day-to-day production caused by poor operating relationship."

Industrial strife has occurred in the Libbey-Owens-Ford plants, including sit-downs, slowdowns, work stoppages, and two prolonged strikes in 1936 and 1945, respectively. However, major issues, such as union recognition and security, seniority, and industry-wide bargaining, were settled somewhat earlier and with less difficulty than usual in mass-production industries. The committee states that "the management and the union appear to be moving forward to a stable and constructive relationship." The case is described as showing progress rather than perfection in labor-management relations. In the 2 years preceding the report, a realistic and practical system of bargaining was evolved, which "has its roots in logical thinking and enlightened self-interest."

Economic benefits to the company are listed as growing volume of production, a sound competitive position, and the ability to reinvest a substantial part of earnings in the business. Union gains are increased take-home pay with increased output, somewhat higher earnings than in other mass-production industries and other glass manufacturing plants, almost doubled earnings compared with those 10 years earlier, and assurance of fair treatment in lay-offs, promotions, rate-setting, and grievances. On balance, both sides have felt comparatively secure, and this security has enabled them to work out a practical bargain, to their mutual advantage.

Special significance is attached by the committee to the fact that management and the union devote

themselves to solving concrete problems. Joint decisions on vital production problems are increasingly frequent, the committee states. The labor policy is unwritten and cannot be found in the collective agreement between the two parties. Both sides stress the value of settlement of day-to-day problems at the plants rather than in the main office.

Major features of the existing relationship, similar to those of Crown-Zellerbach Corp. (discussed below), are:

Management believes in the principles and practice of true collective bargaining.

The union fully accepts private ownership and operation of the industry.

There is a secure, strong, responsible, and highly democratic union. Union membership is a condition of employment.

Widespread union-management consultation and highly developed information sharing are in effect. The company uses the union as a principal channel of communication with its employees.

The union-management relationship is looked upon by the company as an important aspect of its production planning and operations problems, and is tackled by the operating people as such; labor relations is not a staff function—it is a primary duty of the line organization.

Grievances are settled promptly in the local plant whenever possible. There is flexibility and informality within the procedure.

Legalism is shunned; bargaining is conducted by the principals of both sides.

The company stays out of the union's internal affairs, and does not seek to alienate the workers' allegiance and loyalty to the union.

Union leaders have not allowed national political issues to become issues in their collective bargaining negotiations.

There have been no serious ideological incompatibilities between the company and union leaders, nor within the union itself.

Mutual trust and confidence exist between the parties to the bargaining.

Plant managers and local union officials are given both responsibility and authority.

Day-to-day bargaining at the local plants, rather than at the company-international union level, is encouraged by both the company and the union.

The union recognizes that its survival and the welfare of its members depend upon the successful operation of the business.

The company considers the union an asset to management and treats it as such.

Management and the union's leaders recognize that a future reduction in demand for glass may endanger their relationship. The committee does

not claim to have made "discovery of a cure-all for conflict" in this case study. Neither does it "expect that studies of a few peaceful situations—no matter how representative of a much larger number—will bring one formula for peace throughout industry." It has, however, expressed the opinion that many of the policies and procedures followed by the Libbey-Owens-Ford Glass Co., and the Glass Workers and by other companies and unions studied in this series may be applied profitably in various industries and areas.

Crown Zellerbach Corp. and Pacific Coast Pulp and Paper Industry¹

Industrial peace in the pulp and paper industry of the west coast has been "remarkable," the National Planning Association committee states in its case study for that industry. "During the past 14 years not a single day's interruption of work has been experienced by any paper mill on the Pacific Coast because of a dispute between a mill and its employees." This does not mean, however, that no grievances have arisen; many have, but "the vast majority have been quickly settled at the local level."

Industry-wide bargaining has contributed to industrial peace in several major ways: It has standardized wages and conditions; it has increased union security by fostering immunity from attacks by rival unions; it has increased the security of the individual employer from discriminatory union attacks; and it has increased the cost of conflict, thus discouraging strikes.

Represented in the complex bargaining system existing in the industry are 32 primary pulp, paper, and paper-converting mills in the States of California, Oregon, and Washington, with plants located as far north as Bellingham, Wash., near the Canadian border, and as far south as Los Angeles. These 32 mills employ approximately 15,000 production and maintenance workers, the majority of whom belong to the International Brotherhood of Pulp, Sulphite and Paper Mill Workers and the International Brotherhood of Paper Makers. Under a series of uniform labor agreements with these two AFL unions, the mill managements,

¹ National Planning Association. Causes of Industrial Peace under Collective Bargaining—Case Study No. 1, Crown Zellerbach and the Pacific Coast Pulp and Paper Industry, [and International Brotherhood of Pulp, Sulphite and Paper Mill Workers and International Brotherhood of Paper Makers], by Clark Kerr and Roger Randall. Washington, 1948.

operating through the Pacific Coast Association of Pulp and Paper Manufacturers, have dealt with production and maintenance employees since 1934. Highlights of this collaboration and its results are summarized as follows in the report:

No authorized strikes have taken place.

The parties have largely relied upon themselves to settle controversies without resort to third parties.

The workers have benefited from relatively good wages and security.

Turn-over and absenteeism have been low.

The unions have felt institutionally secure from management attacks.

Profits have been good and productivity high.

Negotiations have been conducted without undue delay.

The parties have shown a disposition for mutual discussion of a wide range of subjects.

The contracts have been observed religiously by both parties.

The representatives of both sides have shown a high degree of respect for each other.

Joint collusive actions against competitors or purchasers have not occurred.

Although the Crown Zellerbach Corp., the largest company in the west coast pulp and paper industry and the second largest in the United States, was selected as the spearhead of the investigation in this industry, its management-labor relations, the report emphasizes, must be evaluated in the light of the region-wide bargaining mechanism of which it is a part. "Without the region-wide approach, peace would not have been so assured."

Good personnel policies, the investigation showed, have been an important factor in peaceful collective bargaining. How they have contributed to good employer-employee relations is illustrated by the outline of some of the personnel policies and practices of the Crown Zellerbach Corp. quoted below:

Employees have been carefully selected, with special attention given to their ability to enter cooperatively into the group life of the plant.

The company has consulted foremen and union representatives on a wide range of problems. It has taken fullest advantage of the constructive potential of unionism by inviting union participation on a consultative basis.

The line organization and the union hierarchy have been effectively used as channels of upward and downward communication. The foremen and the shop stewards have been considered particularly vital links.

Managerial responsibility has been projected downward and widely diffused. The ratio of foremen to

workers has been high, and they have been fairly treated and given considerable authority.

The sense of security of the individual workers has been strengthened by promotions largely in line with seniority, by a liberal retirement system, and by the socially engineered introduction of change.

Paternalism has been avoided.

An important test of managers has been their ability to get along with the men they supervise.

Pat formulas and rigid rules have been avoided.

Environmental conditions—an expanding and profitable industry, a homogeneous work force, interesting jobs, and regular employment—have been favorable to industrial peace in the west coast pulp and paper industry, although, the report states, they did not assure it. "The possession and exercise of a high degree of social skill by the leaders on both sides of the relationship was essential to the development of the structure of peace." The success of industry-wide bargaining in this instance demonstrates, according to the report, the contribution such bargaining can make to industrial peace "without domination by either side or collusion against the consumer." However, the writers point out, peace in the industry is not fully assured for the future." A potential disruptive factor is rival unionism, in which the various craft unions in the industry might become involved, each with a separate contract and competing aspirations. Therefore, peace "depends, part, on the continued harmonious working relationships between the two established unions; and the protection of their jurisdiction from fragmentation by craft unions."

Labor-Management Disputes in November 1948

STRIKES OF DOCK WORKERS on both the Atlantic and Pacific Coasts, with resultant disruptions to deep-sea commerce, highlighted November labor-management disputes. The West Coast maritime stoppage¹ which began September 2 was virtually settled by the end of November; the strike of longshoremen on the East Coast tied up shipping in Atlantic ports during more than half of the month.

¹ See *Monthly Labor Review*, October 1948 (pp. 394 and 395).

The California oil refinery strike¹ which began September 4 likewise tapered off with the negotiation of contracts on an individual company basis for a 12½ cent hourly wage increase. By the end of the month only about 3,500 refinery workers were still idle. Many of these were employees of the Union Oil Co. Toward the end of November a settlement was reached between National Airlines and the Air Line Pilots Association (AFL) in a dispute which had continued for approximately 10 months.

West Coast Maritime Strike: Partial Settlement

By the month's end the prolonged West Coast maritime strike was nearing complete settlement. An agreement between shipping and waterfront employers and the International Longshoremen's and Warehousemen's Association (CIO) on November 25 paved the way for the expected adjustment of controversies still existing with several other maritime unions. The 3-year contract reached with the longshoremen provided for a wage increase of 15 cents an hour, additional vacation benefits, and for the retention of union hiring halls pending a court decision on their legality.

Negotiations which had been deadlocked for several weeks, because of employer refusal to negotiate with union representatives who had not signed non-Communist affidavits as provided for in the Labor Management Relations Act, were resumed on November 10 under a formula proposed by Almon E. Roth, representing the San Francisco Employers Council. Union and company representatives agreed to negotiate for 10 days, at the end of which time the employers' latest offer would be submitted to union members for a vote on acceptance. At the end of this period, however, the parties were near agreement and continued negotiations until the longshoremen's settlement was announced on November 25.

Members of the CIO longshoremen's union ratified the agreement within the next few days, but work was not resumed until December 6 following settlements with the Marine Cooks and Stewards (CIO), Marine Firemen (Ind.), and CIO Radio Officers. A tentative agreement had been reached previously with the Marine Engineers' Beneficial Association (CIO).

East Coast Dock Strike

Approximately 45,000 members of the International Longshoremen's Association (AFL) were involved in the East Coast stoppage of dock workers which began as sporadic stoppages November 10 but 2 days later became a union authorized coast-wide strike, which virtually tied up shipping from Portland, Maine, to Hampton Roads, Va. Terms of settlement, agreed upon November 25, provided for hourly wage increases of 13 cents in straight-time rates and 19½ cents for night, holiday, and weekend rates, for a welfare plan, and for improved vacation benefits.

The previous agreement between the union and shipping operators had expired August 21 with negotiations prior to that date failing to yield a satisfactory new contract. Increased wages and application of overtime rates were the principal issues—the union demanding increases of 50 cents an hour in straight time rates and 75 cents in overtime rates.

The President had appointed a board of inquiry on August 17² under provisions of the Labor Management Relations Act of 1947. Upon receipt of the board's report a temporary restraining order was sought to prevent the strike threatened for August 21. This order was granted on that date and was followed 3 days later by an 80-day injunction issued in New York by Federal Judge Harold R. Medina. The board's final report to

² Members of the board were Saul Wallen, labor attorney, Boston, Mass., chairman; Julius Cass, attorney, New York City; and Joseph Miller, labor consultant, Washington, D. C.

the President was made on October 21, and the National Labor Relations Board conducted a hearing among longshoremen on November 4 and 5, at which the last offer of the employers was rejected.

Union and employer negotiators reached a year agreement providing for hourly wage increases of 10 cents in day rates and 15 cents in night and week-end rates on November 9. Some of the local unions immediately voted against acceptance of this agreement, however, and scattered stoppages developed after the 80-day injunction was dissolved, as of midnight November 9. When a majority of the locals voted against acceptance of the agreement the union gave official approval to the strike.

As negotiations continued over a period of more than 2 weeks, it was estimated that around 250 ships were tied up in various Atlantic ports. Truck drivers and railroad workers were laid off as cargoes could not be moved. Ships destined for United States ports were diverted to Halifax, Nova Scotia, and passengers scheduled to sail on vessels from New York were transported to Halifax by train.

A settlement was reached in the early morning hours of November 25 with the assistance of Cyrus S. Ching, Director of the Federal Mediation and Conciliation Service. The settlement was ratified by the union membership November 27 and work was resumed in most ports the next day. Five local unions in Brooklyn, N. Y., voted against acceptance of the agreement on November 27 but decided the next day to go along with the majority.

Technical Notes

The Rent Index:

Part 1—Concept and Measurement¹

EDITOR'S NOTE: This is the first of a two-part article dealing with the basic concepts underlying, and the methodology employed in calculating, the rent component of the consumers' price index. Part 2, dealing with the methodology, will appear in the January 1949 issue of the *Monthly Labor Review*. Both parts will be available in reprint form during February.

THE RENT INDEX of the Bureau of Labor Statistics is designed to be consistent, in concept and method, with the consumers' price index (CPI), of which it is a component. The CPI measures average changes in retail prices of a bill of goods and services, of constant quantities and qualities, usually purchased by moderate-income families in large cities.² In the same way, the rent index measures the changes in the rental price of identical units of housing, with identical facilities and services. Both are designed to reflect price changes only, and to exclude the effect on family expenditures of changes in the quantity or quality of goods and services purchased. The rent index is based on changes in the contract rents charged for samples of rental dwellings in each of 34 large cities and their adjacent suburbs. The rent change reflected in the index for these identical dwellings is the relative of the average rent in the beginning period to the average rent in the ending period, after adjustment for changes in facilities and services.

The various components of the CPI represent all the essentials of family living—food, apparel, housing, etc.—weighted together by the average expenditures (costs weights) of moderate income

families in large cities in 1934–36. Because of the nature and variety of "housing" costs, individual items of housing expense appear in four of the six major components of the CPI—Rent; Fuel, light, and refrigeration; Housefurnishings; and Miscellaneous (which includes expenditures for household operation, such as water, laundry, telephone, etc.). Table 1 shows that the changes in *total housing costs* are measured not by the rent index alone. In fact, the rent index has risen less than prices of other housing items; some items not included in rent have about doubled since 1935–39.

TABLE 1.—Major groups of the CPI—relative importance and indexes for December 1947¹

Group	December 1947	
	Relative importance of major components	Indexes (1935–39 = 100)
Food	42.0	206.9
Apparel	12.0	191.2
<i>Housing costs</i>		
Rent ²	12.5	115.4
Fuel, light, and refrigeration	4.9	127.8
Housefurnishings	4.8	191.4
Miscellaneous:		
Allocated items ³	19.6	144.4
Unallocated items	4.2	167.0
Total	100.0	167.0

¹ See *Importance of CPI Components*, by Abner Hurwitz, *Monthly Labor Review*, August 1948 (or reprint, Serial No. R. 1933).

² For some tenants, rent includes the cost of shelter plus some or all of the other housing costs.

³ Fourteen percent of this weight is for household operations such as water rent, laundry, telephone, domestic service, etc.

For some families monthly rent covers all housing costs, e. g., occupants of furnished apartments. Other tenants, and of course all home owners, purchase utilities and furnishings separately. Because of these variations, the cost weight of the rental index is the *average expenditure* in 1934–36 of all tenants for shelter plus such other housing items as were included in the rental price, combined with the *average expenditures* of

¹ Prepared by Helen Humes and Bruno Schiro of the Bureau's Division of Prices and Cost of Living.

² See *The CPI—A Summary of Its Essential Features*, by Ewan Clague, *Monthly Labor Review*, July 1948, or reprint Serial No. R. 1927.

owners for current home maintenance, i. e., interest, taxes, insurance, and repairs.³ The cost weights for the indexes of Fuel, light, and refrigeration, Housefurnishings, and the housing portion of Miscellaneous are the average expenditures of all home owners and of that proportion of tenants who purchased these items separately from their rent. For example, average expenditures in 1934-36 for selected families in Portland, Maine, were:

Total expenditures.....	\$1,483
Food.....	488
Apparel.....	154
Rent.....	254
Fuel, light, and refrigeration.....	136
Housefurnishings.....	59
Miscellaneous.....	392

The *rent total* represents home maintenance costs for 23 percent of the families who owned their homes, and the rent paid by 77 percent of the families who were tenants. The rent paid included shelter cost for all tenant families, water (for 93 percent of the tenant families for whom water was included in the rent), cooking fuel (for 9 percent), heating fuel (for 18 percent), light (for 5 percent), and furnishings (for 12 percent). The separate figures for fuel, light, refrigeration, furnishings, and miscellaneous represent the expenditures of *all* home owners, and of those tenants who pay separately for these items.

Home-owner costs are included in the cost weight for the rent index, since in normal times changes in the price of maintaining owned homes, i. e., taxes, insurance, interest, and repairs, are likely to show the same trend as rent changes. This imputation of the cost weight for home ownership to the rent index is consistent with the imputation pattern of other components of the CPI, in which the cost weight for an unpriced item is imputed to changes in the price of a similar item, e. g., trend of cream prices is represented by changes in the price of milk. (See footnote 1.)

³ Expenditures for cash purchases of homes, payments on mortgage principal, and the cost of additions or capital improvements were considered as investments, not expense for current maintenance, and therefore excluded. This is in line with the usual practice in consumer expenditure studies. See 1948 Survey of Consumer Finances, Part V, Housing Expenditure and Finances, Federal Reserve Bulletin, September 1948. It is true that an indeterminate portion of payments on mortgage principal represent protection of the equity and may legitimately be considered as a cost for current consumption. See Housing and Fuel Expenditures of City Families, in Monthly Labor Review, May 1947, or reprint Serial No. R. 1889.

The problems raised by this imputation procedure will be discussed more fully in part 2 of this article. Similarity of movement was found to prevail in a period free from price and rent control, but it is difficult to estimate the extent to which this is true in a period of control covering rents but not the items of owner-maintenance costs. Plans are currently under way for developing a technique to measure separately changes in the prices of items required to maintain owner-occupied homes.

The Concept of the Rent Index

The rent index is intended to measure changes from time to time in rent for family dwellings of the same quantity and quality. It purposely excludes price differences resulting from changes in the facilities and services covered by the rent. There is continuous shifting in the pattern of housing items covered by rent, and in the proportion of tenant and owner families. For example, in Portland, Maine, the city cited above, a 1944 survey showed that since 1934-36 the proportion of renting families had decreased from 77 to 60 percent, and that the proportion of the tenants whose heat was included in the rent had increased from 18 to 36 percent. The procedures developed for excluding from the rent component those changes which are measured by the other components of the over-all CPI will be discussed in part 2.

Although the concept of the rent index is the same as that for other components of the CPI, the characteristics of the housing commodity present problems of measurement not encountered for the other items. First, intangible values such as neighborhood location, neighborhood changes, location within a structure, and structural and decorative differences in dwellings, complicate the problem of pricing identical qualities of housing. Second, housing as a commodity is bought and consumed differently from other commodities. Shelter is *purchased* currently, through rent or maintenance costs; but housing as a commodity is not "consumed," that is to say, it does not disappear except after long periods of time. Because most families live in "used" dwellings relatively few families contract for new housing at any given time, and the "price" of housing is the price they pay currently, in the form of rent or home maintenance costs.

In order to control identity of quality, the Bureau prices identical dwellings from month to month. And because shelter is purchased continuously (and not only when it is initially contracted for), the samples of dwellings priced are representative of the housing supply, and not only those newly bought or newly rented.

Therefore, the rent index is based on changes in the contract rents charged for samples of rental dwellings, selected periodically to represent all types of family rental dwellings in each of the 34 large cities and their adjacent suburbs. The sample is not limited to any classes of neighborhoods or dwellings assumed to be characteristic of moderate-income families, as is done for other goods and services, because moderate-income families currently live in almost all qualities of housing. Because of the nature of contract rent, adjustments are made during tabulation to insure comparison of price for the same quantity and quality of housing. The procedure of comparing rents for the same dwellings, after making adjustment for changes in the facilities and services included in the rent, provides a means of measuring changes in rent for dwellings existing at the time of the sample selection, analogous to the use of specifications to follow price trends for comparable qualities of other consumer goods. The representativeness of the rental prices is maintained by periodic sample revisions, just as changes in specifications maintain the representativeness of other commodity prices.

Thus, the rent index is designed to exclude those changes in housing costs which occur when families move to better or poorer quarters, larger or smaller units, or shift from tenant to owner status. These moves result in changes in expenditures made by families for different quantities and qualities of housing, but they are not price changes. For example, a family may move from a three-room \$20-a-month dwelling to a six-room \$40 dwelling, with a consequent 100-percent increase in its *expenditure* for rent, but without any change in the *price* of either dwelling.

Neither does the rent index measure differences in rents which a family may pay when moving from one city to another, either for the same or a different quality of housing. Differences in rent

among cities for the same quality of housing are measured by intercity indexes, such as those developed in the Bureau's city worker's family budget study.⁴

The rent index does not measure changes in the total rent bill or total rental income for an area from one time to another. Differences in the rent bill for an area reflect shifts in the proportion of tenants to owners, and changes in the total number and kind of rental dwellings on the market, as well as price changes as measured by the rent index. Total expenditures for rent may decrease at a time when rental rates are stable or increasing. For example, the total expenditures for rent for nonfarm dwellings in the United States as measured by the Department of Commerce, dropped from 4,591 million dollars in 1944 to 4,488 million dollars in 1946,⁵ a reflection of a marked shift from tenant- to owner-occupancy during this period. The CPI rent index for this same period increased slightly. Similarly, neither the rent index nor comparison of average rents can be used as an indicator of the net operating income of owners of rental property, because the net operating income is determined by the differences between total rental income and total operating costs. Occupancy rates as well as rent levels determine the magnitude of total rental income and some operating costs are subject to deferral or discontinuance.⁶

Even though changes in current maintenance costs to home owners are assumed to have the same trend as rents, changes in sales prices of homes are deliberately excluded from the index, since outlays for home purchase are not considered as current housing costs. (See footnote 3.) During the war and postwar periods, sales prices of homes—not subject to wartime price controls—increased substantially more than residential rents, and many families, forced to buy, had marked increases in their total money outlay for housing. However, in many cases this resulted in a profitable investment. Profits or loss from investments of this kind cannot be reflected

⁴ See *Monthly Labor Review*, February 1948, or Bulletin 927, City Worker's Family Budget.

⁵ National Income Supplement to Survey of Current Business, July 1947, table 30, p. 42.

⁶ See General Fleming's Testimony in hearings before the Committee on Banking and Currency, U. S. Senate, 80th Cong., 1st sess., January 1947, p. 189.

in an index of prices for items of current consumption.⁷

Since the rent index is a measure of changes in rents prevailing for all tenant-occupied dwellings, it cannot be used as an indicator of changes in the price of dwellings *available* for rent (i. e., vacant rental units) from one time to another. Such rent differences would reflect primarily differences in the immediately available rental housing supply from time to time, and not price changes for the quantity and quality of housing that is being currently "purchased" and used. An index based on the rents of available housing would be substantially different from an index of price changes for occupied homes and would not be consistent with the concept of the CPI.⁸

Index versus Average Contract Rent

Comparisons of average contract rents obtained by the Census of Housing in April 1940 with average contract rents shown in subsequent sample surveys have raised many questions about the Bureau's rent index on the assumption that an accurate rent index should parallel the changes in average contract rent.⁹ (See table 2.)

Changes in the average contract rent of a city from time to time result from any one or a combination of the following factors:

(1) Price change, i. e., rent change without accompanying change in facilities and services. This is measured by the CPI rent index.

(2) Changes in facilities and services with resulting rent changes. When the change in rent

⁷ Nevertheless, a sales price index, though difficult to construct, would be an extremely useful and sensitive indicator of housing market activity. Research in measuring changes in sales prices of homes was carried on by the National Housing Agency during the war. See *Inflation in Homes and Home Sites*, National Housing Agency, Washington, D. C., April 1946. This comprehensive expert opinion survey showed that between the spring of 1940 and February 1946 prices of homes which sold for \$6,000 or less (in 1940) rose by 65 percent while those which sold for \$6,000 to \$12,000 advanced 57 percent in price.

⁸ During periods of extreme housing shortages, desirable moderately priced dwellings are occupied and only the very high or the very low rent units are vacant. For example, in Kansas City, Mo., in April 1940, vacant units represented 8 percent of total dwellings and had an average (median) rent of \$21.74. By December 1944, the vacancy rate had decreased to 0.3 percent and the average (median) rent of vacant units was \$16 or 26.4 percent below 1940. The CPI rent index for Kansas City for the same period increased 6.8 percent. In Savannah, Ga., the vacancy rate in 1940 was 3.0 percent and the average rent of vacant units was \$12.86. By September 1945, the vacancy rate had fallen to 0.4 percent and the average (median) rent of vacant units was \$41.50, an increase of over 200 percent above 1940. The CPI rent index for the same period increased 11.0 percent.

⁹ See Hearings Before a Subcommittee of the Committee on Banking and Currency, U. S. Senate, 80th Cong., 2d sess., January 1948, Part I, pp. 425-426.

equals the value of the facilities or services included or excluded, the CPI index does not, and should not reflect the change. Changes in excess of the values of facilities and services are reflected as rent changes.

TABLE 2.—*Changes in average contract rents compared with changes in CPI rent index for 34 large cities*

City	Average (median) rents		
	April 1940	April 1947	Percent increase
Atlanta	\$15	\$20	33
Baltimore	24	34	42
Birmingham	12	15	25
Boston	29	32	10
Buffalo	26	30	15
Chicago	32	38	19
Cincinnati	20	25	25
Cleveland	28	34	21
Denver	23	32	39
Detroit	32	37	16
Houston	22	29	32
Indianapolis	21	34	62
Jacksonville	15	24	60
Kansas City	21	31	48
Los Angeles	27	35	30
Manchester	19	22	16
Memphis	14	20	43
Milwaukee	30	35	17
Minneapolis	27	33	22
Mobile	12	25	108
New Orleans	15	21	40
New York	37	39	5
Norfolk	18	31	72
Philadelphia	26	31	19
Pittsburgh	22	29	32
Portland, Maine	25	33	32
Portland, Oreg.	19	33	74
Richmond	18	22	22
St. Louis	20	24	20
San Francisco	29	36	24
Savannah	11	(?)	(?)
Scranton	19	23	21
Seattle	22	35	59
Washington	41	50	22

¹ Period is April 1940 to fall 1944 BLS Sample survey, based on average (mean) rents.

² Period is April 1940 to summer of 1946 BLS or Census sample survey.

³ Not available.

Source: U. S. Census of Housing, April 1940; Current Population Report on Housing, April 1947; and Special Surveys of the Bureau of the Census and the Bureau of Labor Statistics.

(3) Changes in the total supply of rental housing, as (a) addition of newly built dwellings at a rent different from the city average; (b) addition of units through conversion of existing housing thus removing dwellings of one size-type and rent level, and replacing with units of a substantially different type and rent; (c) removal of rental units through owner occupancy and additions of previously owner-occupied units at a rent different from the city average; (d) addition through rental of previously vacant units and removal from the market through vacancy of previously occupied

or service units; (e) removal of rental units through demolition, conversion to commercial or other purposes, or sales in excess of those reflected in the CPI.

The rent index should measure only price changes—not changes in the composition of the rental housing supply. Additions to the supply of rents comparable to those for existing housing of the same quality should not affect the rent index, though they may affect the average rent for the city. But the index should reflect changes which arise from the addition of new units which enter the market at rents different from rents for existing housing of the same quality, whether or not such rent differences affect the city-wide average contract rent.¹⁰

Among those cities with the greatest increase in average contract rent (table 2) are those which had the highest volume of wartime housing as well as those which experienced the largest shifts from tenant-to-owner-occupancy. Mobile, Norfolk, and Portland, Oreg., which all had a large amount

TABLE 3.—Comparison of 1944 and 1945 average contract rents with those in 1940 in selected small cities not under rent control

City	Date	Ten- ant units	Aver- age rent	Percent change—	
				Average contract rents	BLS rent index, March 1942 to survey date ¹
Census	April 1940	201	\$20.70		
BLS survey	March 1945	97	16.20	-21.7	+6.8
Census	April 1940	331	13.24		
BLS survey	October 1944	192	12.98	-2.0	+7.9
Census	April 1940	233	18.03		
BLS survey	January 1945	125	17.55	-2.7	+5.7
Census	April 1940	285	15.91		
BLS survey	January 1945	122	16.05	+.9	+9.8
Census	April 1940	423	10.90		
BLS survey	November 1944	279	21.06	+93.2	+32.2
Census	April 1940	351	15.41		
BLS survey	January 1945	190	28.53	+85.1	+10.3
Census	April 1940	520	10.94		
BLS survey	November 1944	395	16.80	+53.6	+18.2

¹Data are not available for the years 1940-42, but in general, rents were rising during that period.

Source: Data for April 1940 from Census of Housing. Data for later periods from BLS special surveys based on complete coverage of tenant dwelling units in each city.

of public "war" housing construction showed the largest increase in contract rent. Two of these cities also had a marked shift from tenant- to

¹⁰The existing rent index does not take account of the rent differential between new units. An estimate of this "new unit" bias will be presented in part 2 of this article. The effect of the new unit bias has generally been exaggerated since there is a tendency to recall excessive differences in rents between "new" and "old" dwellings without allowing for quality differences, or without evaluating the relative importance of new rental units to the total housing supply of the community. Nevertheless, the Bureau is currently investigating possible ways of measuring accurately the price differential between new and old housing of the same quality.

owner-occupancy among the privately financed dwellings—44 percent increase in owner-occupancy in Mobile and 54 percent in Norfolk (and 23 percent in Portland) between 1940 and 1945. By contrast in New York City, where relatively slight changes occurred in the rental housing universe, the increase in contract rent was only 5 percent. In Boston, where the increase in owner-occupancy amounted to only 10 percent and very little new construction occurred, the increase in contract rent was also slight.

Thus, the trend in average contract rents may move at a different rate and even in a different direction from the trend in rents for the same quality and quantity of housing. This is illustrated by the diagram on page 636 and table 3.

Table 3 shows what actually happened to average rents in small cities as a result of substantial changes in the tenant dwelling supply. In the years between 1940 and 1947 there was a marked shift from tenant- to owner-occupancy in non-farm areas of the United States—from 41.1 percent owner-occupied in 1940 to 52.6 percent in 1947.¹¹ The reduction in units on the rental market resulting from this shift was concentrated among the single-family type dwellings. Average (median) rents by type of dwellings for United States urban and rural nonfarm areas in April 1940 were as follows:

	Median monthly rent
All tenant-occupied dwellings	\$21.41
Single family	16.71
Multifamily	24.54
Multifamily in structures containing 5 or more units	32.37

Thus, the removal of single-family dwellings from the rental market would tend to result in an increase in contract rent.

An analysis of data for Seattle illustrates how a combination of factors results in differences between the movement of average contract rent and the CPI rent index. The Bureau's rent index increased 11.3 percent from the 1935-39 average (base period of the CPI) to September 1944. The Seattle contract rent over the same period rose 52 percent, or from \$22.50 to \$34.18. However, changes in the pattern of facilities included in the rent were responsible for a large part of this

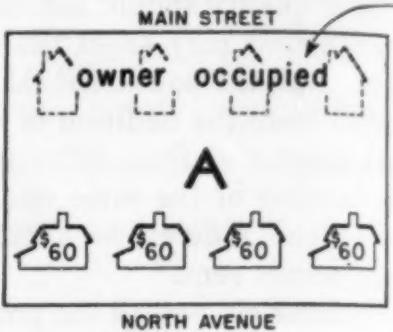
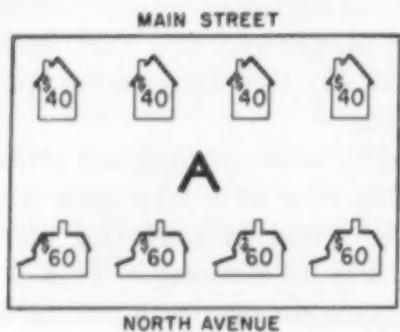
¹¹ See Current Population Report—Series P-70 No. 1, Housing Characteristics of the U. S.: April 1947; also see Effect of Wartime Housing Shortages on Homeownership, in Monthly Labor Review, April 1946, or reprint Serial No. R. 1840.

Comparisons of Average Contract Rent Reflect All Changes in the Rental Market

In 1940 the average rent in block A was \$50-----

And although no home had a rent increase-----

By 1947, the average rent was \$60, because the Main St. homes were

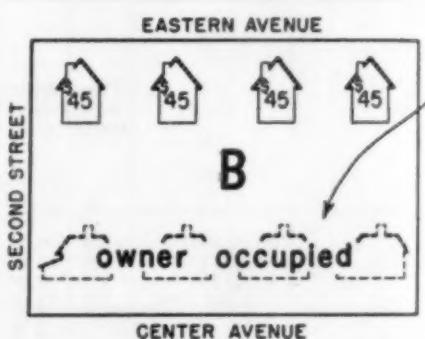
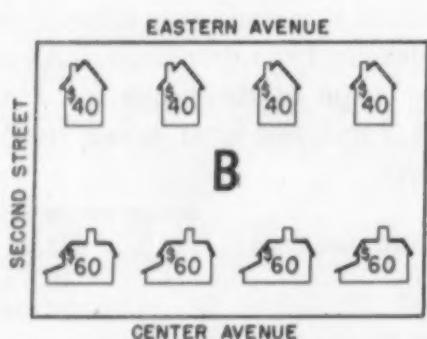


So for block "A" the Rent Index would show no change, although average rent increased 20%

In 1940 the average rent in block B was \$50-----

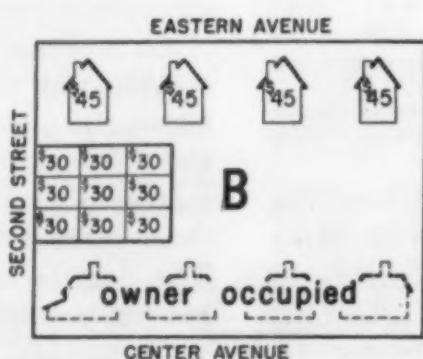
Even though the rent of homes on Eastern Ave. increased \$5.00

By 1944 the average rent for block "B" dropped to \$45, because the homes on Center Ave. were



For this block the Rent Index would show an increase of 12.5%, while average rent declined 10%

By 1947 the average rent for block "B" declined even further, because of a new apartment on 2nd St.



The Rent Index would still be 12.5% above 1940, while average rent for the block would be 30.8% below 1940.

crease. The proportion of units having specified facilities included in the rent rose as shown below:

	<i>Percent of tenant units having facility included in rent</i>	
	<i>1935-39</i>	<i>1944</i>
Heat.....	29	78
Electricity.....	6	53
Gas.....	5	28
Water.....	71	94
Furnishings.....	49	58

Because of this marked increase in the proportion of specified facilities covered by the rent, it is evident that total housing costs did not increase sharply as did contract rent. The Bureau estimates that changes in the facilities included in the rent would account for a 31-percent increase in contract rent. This much of the increase in contract rent was reflected in other components of the CPI for Seattle, that is, in the fuel and light, furnishings, and miscellaneous groups.¹²

Other changes in the quantity and quality of rental housing, which should not be reflected in the CPI rent index, account for most of the remaining points of the 52-percent increase in the Seattle average contract rent. For example:

(a) Public housing, representing approximately 1 percent of the 1944 rental universe in Seattle, came on the market during this period at an average rental of \$38, or 69 percent above the

This estimate was made as follows: Using the "cost weights" in the index to determine the value of the various facilities and services as of September 1935, the total housing cost for Seattle as of the base period and as of September 1944 were computed. The percent change in the total housing costs, including differences resulting from other universe changes, was 21 percent. This subtracted from the 52-percent difference in average contract rent is the basis for the estimated 31-percent increase in the contract rent due to facility changes.

city-wide average, but at no higher rent than that for comparable existing dwellings (as required by law).¹³

(b) The average rent for units removed from the rental market for owner-occupancy, conversion, or demolition, as determined by losses from the CPI rent sample, was lower than the average for the remaining rental units. Thus, the mere removal of these units increased the city-wide average rent.

(c) Vacant units in 1940 represented 5.8 percent of all dwellings and had an average rent 7 percent higher than the average of occupied rental units. By 1944, the vacancy rate for habitable rental units was 0.4 percent. The net effect of the absorption of the vacancies was to increase the average rent.

(d) The addition of new private rental dwellings through new construction and conversion likewise would affect the average contract rent for Seattle, but the level of rent for new units represents a price change only when the rent for new units is different from that for the same quality of existing dwellings. For example, a unit coming onto the market at a level higher than city-wide average increases the average contract rent. It may, however, as in public housing, be renting at the same rent as that for existing housing of the same type and would, therefore, not be reflected as a price change. This does not imply that all new units came on at the same rent as that for equivalent existing dwellings.¹⁴

¹² See Lanham Act, as Amended, Public No. 849, 76th Congress, section 304, and Manual of Policy and Procedure, section 3612 (2).

¹⁴ Part 2 will contain a discussion on "new unit" bias.

Recent Decisions of Interest to Labor¹

Wages and Hours²

Factory Store Employees Necessary to Production. A Federal district court held³ that the Fair Labor Standards Act applies to employees of factory stores.

The employer, an independent company, maintains four canteens and a cafeteria ("factory stores") on the property of a steel company. Under an agreement between the companies, the canteens sell food and various miscellaneous items to employees of the adjacent mills. The mills and also the canteens are open 24 hours a day, 7 days a week. Company rules prevent mill workers from leaving the premises during working hours; therefore, most of them patronize the canteens, since their only other sources of food are lunch baskets or lunch wagons. Nearly all the canteens' patrons are workers in the steel company's plants.

The cafeteria serves the office workers, plant supervisors, and executives for 1½ hours each morning and at noon. Executives have a special room, where company business is often discussed.

Canteen and cafeteria employees, the court held, were engaged in an occupation necessary to the production of goods for commerce, and pointed out that, to be engaged in production, the Fair Labor Standards Act does not require the employees themselves actually to participate in the physical handling of the goods. To be "necessary" to production an employee's work need not be indispensable to the production of goods; if it,

¹ Prepared in the Office of the Solicitor, U. S. Department of Labor. The cases covered in this article represent a selection of the significant decisions believed to be of special interest. No attempt has been made to reflect all recent judicial and administrative developments in the field of labor law or to indicate the effect of particular decisions in jurisdictions in which contrary results may be reached, based upon local statutory provisions, the existence of local precedents, or a different approach by the courts to the issue presented.

² This section is intended merely as a digest of some recent decisions involving the Fair Labor Standards Act and the Portal-to-Portal Act. It is not to be construed and may not be relied upon as interpretation of these acts by the Administrator of the Wage and Hour Division or any agency of the Department of Labor.

³ *McComb v. Factory Stores Co.* (U. S. D. C., N. D. Ohio, Oct. 5, 1948).

in any manner, contributes to, furthers, or benefits a production method that is efficient and safe, the employee comes within the act's coverage provisions. Feeding the millworkers was held to be necessary to production as maintenance of tools, repair of pipes, and many other operations.

The employer contended that the canteens were a mere convenience for the steel workers, since at one time food was acquired from outside the plant. The court held, to the contrary, that the canteens were so intimately associated with, as to become an integral part of, the production of goods. Among the numerous advantages accruing to the steel company from establishment of canteens was the inducement to workers to seek employment in the steel mills during the war labor shortage and to work additional shifts. Any claim that the same efficiency would be maintained without the canteens was held to be purely conjectural. The cafeteria had directly aided production by saving time for office employees who did not have to go outside for lunch; and by serving as a place for discussion of company business.

The case⁴ in which the United States Supreme Court decided that a cook serving railway maintenance employees was not engaged in commerce was held not applicable in this instance, because the definition of engaging in commerce is much narrower than that of engaging in the production of goods for commerce.

Store employees, the employer contended, were exempt as employees of a retail or service establishment. Employees of the latter class who served the ultimate consumer, the court pointed out, were almost never engaged in the production of goods for commerce, as were factory-store employees, and canteens for steel mills could not be compared with the local merchant or the corner grocery.

Exemption of Administrative Employees. A Federal district court held⁵ that a bookkeeper for a company engaged in the sale of women's hats and apparel was not exempt as an administrative employee from the Fair Labor Standards Act provisions.

The bookkeeper's duties included keeping the firm's books of original entry, ledgers, pay-roll records, cash books, accounts receivable and

⁴ *McLeod v. Threlkeld* (319 U. S. 491).

⁵ *Tesch v. Reine, Inc.* (U. S. D. C., S. D. N. Y., June 11, 1948).

able; preparing bills, statements, and payrolls; and drawing cash for pay rolls from the bank. During the absence of the president of the firm, the vice president having resigned, the bookkeeper was given the title of secretary. However, she was told at the time that she was "a dummy" and had no additional duties except to sign checks for which payment had been approved by the treasurer. All her activities were supervised by the other firm officers. She exercised no discretion or authority in the conduct or management of the business and had no power to hire or fire other employees.

The bookkeeper was not exempt from the overruling provisions of the act as an executive or administrative employee, the court ruled, since her designation as "secretary" could not make her an administrative employee within the meaning of section 13 (a) (1). Obviously, the court pointed out, she had been appointed secretary as a measure of administrative convenience, to obtain necessary signatures for checks during the president's absence. Although the salary requirements of the Administrator's regulations defining and delimiting the terms "executive" and "administrative" were met, it was clear that the other requirements of the regulations, such as the exercise of discretionary power, or of the right to hire and fire, were not met; therefore, she did not qualify for the exemption.

Labor Relations

Mass Picketing as Unfair Labor Practice. The National Labor Relations Board ruled⁶ that under certain circumstances mass picketing constitutes an unfair labor practice. Section 8 (b) (1) (A) of the National Labor Relations Act as amended by the Labor Management Relations Act of 1947, provides: "It shall be an unfair labor practice for a labor organization or its agents (1) to restrain or coerce (A) employees in the exercise of rights guaranteed in section 7 * * *." Section 7 grants to employees the right to self-organization, to form, join or assist labor organizations to bargain collectively through representatives of their own choosing, and to engage in other activities for the purpose of collective

bargaining or other mutual aid or protection, and also the "right to refrain from any or all of such activities." The Board held that the last-mentioned right included the right to refrain from striking and to go to and from work without restraint or coercion while a strike is in progress.

The legislative history of section 8 (b) (1) (A) indicated, the Board pointed out, that it was to be interpreted in the same way as section 8 (a) (1), which concerned restraint or coercion by employers. Mere verbal abuse and vilification and name-calling by pickets, when unaccompanied by threats of violence, was held not to be restraint or coercion; but physical violence or threats thereof was not justified. The union's plea that the employer had provoked the violence by refusing to bargain or by other unfair labor practices was no defense.

Actions held to constitute restraint or coercion within the meaning of section 8 (b) (1) (A) were: (1) Conduct of strikers and their companions in trailing a greatly outnumbered group of strikebreakers around the town—considered an unspoken threat of violence; that the strikebreakers were not thereby deterred from returning to work was held immaterial. (2) A union agent's threat to "beat up" a strikebreaker who had sworn at women pickets—held to be caused by a motive to discourage "scabbing" as well as by anger at the treatment of the women. (3) Interposition of passive force so that drivers had to choose between running down pickets or driving away from the plant. (4) Ordering pickets to "pull" passengers out of a car. (5) Massing 200 to 300 pickets, strikers, and other union members on the driveway leading to the employer's parking lot, thereby forcibly blocking cars carrying strikebreakers to the struck plant.

The Board pointed out that no one of the activities by individual pickets was an unfair labor practice under section 8 (b) (1) (A) unless authorized by the labor union. Since enactment of the Labor Management Relations Act, the same tests were held to apply to unions and to employers in the determination of responsibility for their agent's acts. The burden of proof was held to be on the party alleging the agency relationship between the pickets and the union, both as to existence of the relationship and as to extent of the agent's authority. Since agency is a con-

⁶ *In re Longshoremen's Union* (70 NLRB No. 207, Oct. 22, 1948).

tractual relationship, authority of the union's agent might be manifested by the union's conduct, or even its passive acquiescence, as well as by words. A union was held to be responsible for its agent's acts within the scope of their authority, even though such actions were contrary to particular instructions.

The Board held that in this case the local union was responsible for the acts of restraint and coercion performed in furtherance of the general purpose of the strike. In some of these episodes, the local union's agent had participated. There was no evidence to rebut the inference that he was authorized to conduct all the union's business in the area. The union's vice president, who also participated in the acts of coercion, was assumed to have general authority to assist in conducting the strike. The fact that union officers did not participate in certain activities was held immaterial, since they started the pattern of conduct from which such activities arose.

The international union with which the local was affiliated was also held responsible for these acts of coercion. In answer to the unfair labor practice charge, the international joined the local in alleging affirmatively that it had conducted the strike and the picketing of the employer; it nowhere asserted that its interest in the strike was less immediate than that of the local. The international's official newspaper reported that its regional director was assigned to guide officers of the local in conducting the picketing. Other evidence showed that the regional director while at the scene of the strike made no effort to stop the violence incited by officers of the local.

Two board members dissented insofar as responsibility of the international union was concerned. They pointed out that mere affiliation between the local and the international was not proof of the latter's responsibility, nor of joint sponsorship of the strike. Admissions to acts of restraint and coercion made in the unions' pleadings were held to be merely for the purpose of argument, viz., that even if coercion had been exercised, it was justified by the employer's actions. The news item on which the majority opinion had relied was anonymous and contained no details as to what sort of guidance the regional director had given the pickets. Neither the news article nor any other evidence, the dissenting members held,

was sufficient proof that the international authorized or ratified the acts of restraint or coercion.

Refusal To Bargain on Pension Plans. The Seventh Circuit Court of Appeals held⁷ that the National Labor Relations Act as amended compels employers to bargain with unions concerning pension, insurance, and retirement plans, provided the union complies with the filing and no Communist affidavit provisions of the act. The court, in affirming the NLRB decision,⁸ held that the fact that the retirement plan was complicated did not prevent it from being a subject for bargaining. Otherwise, a premium would be placed on complicated plans to remove them from the scope of the act.

Section 9 (a) of both the original and the amended National Labor Relations Acts lists subjects for bargaining "rates of pay, wage hours of employment, or other conditions of employment." The court ruled that "wages" included pensions and other retirement benefits since such emoluments had long been considered payments for services rendered and not mere gifts.

The plan in question provided for all employee retirement at age 65. If a retirement plan were not a subject for bargaining, the court pointed out, the arbitrary lowering or advancing of retirement ages for employees could nullify the effect of seniority provisions. Seniority was certainly a "condition of employment."

The employer had argued that retirement age concerned "tenure of employment," referred to in other sections of the act but not in section 9 (a), and that if Congress had wished "tenure of employment" to be included as a subject of bargaining, it would have been expressly included in section 9 (a). But the court held that the term "conditions of employment" included tenure. Knowledge of when one would be forced to retire was a condition of employment accepted when taking a job.

The Railway Labor Act, under which, it was argued, pension plans had never been a subject of bargaining, was distinguished from the National Labor Relations Act. The Railway Labor Act listed as bargainable "rates of pay, rules or working conditions." The addition of "wages" in the

⁷ *Inland Steel Co. v. NLRB* (U. S. C. C. A. (7th), Sept. 23, 1948).

⁸ See Monthly Labor Review, June 1948 (p. 648).

bargaining provisions of the National Labor Relations Act indicated that that word should be given a broad interpretation.

Non-Communist Affidavit Provisions Constitutional. In the same case⁹ the circuit court upheld the validity of section 9 (h) of the amended National Labor Relations Act, which requires any union wishing to utilize the machinery of the NLRB to file with the Board affidavits executed by all officers of the union declaring that the signing officer is not a member of or affiliated with the Communist Party, and "does not believe in, and is not a member of or supports any organization that believes in or teaches, the overthrow of the United States Government by force or by any legal or unconstitutional methods."

The court held that these provisions did not deny freedom of speech or thought or freedom of assembly and were not contrary to the ninth and tenth amendments, reserving rights to the people and to the States. They did not make Communist beliefs or expression punishable but merely denied access to the benefits granted under the act. Such denial did not unconstitutionally deprive noncomplying unions of privileges. The rights granted to labor unions and the duties imposed upon employers by the National Labor Relations Act of 1935 were not guaranteed by the Constitution. Those provisions were enacted

pursuant to the power of Congress to regulate commerce and for the purpose of protecting the public interest. The same purpose was evident in the Labor Management Relations Act of 1947. The legislative history of this act indicated that Congress was of the opinion, which the court thought not unreasonable, that Communists had used labor unions as a means of promoting industrial strife and obstructing commerce in order to gain political power. Since this was contrary to the purpose of the act, the denial to noncomplying unions of privileges under the act was held not unreasonable.

The language of the statute which had been attacked as too vague, the court held, was as specific as the nature of the problem permitted and was not so vague that men of common intelligence must guess at its meaning or differ as to its application. A person could not be convicted of perjury, it was pointed out, unless he

signed the affidavit when he knowingly held such beliefs or engaged in such activities.

Nor was the statute a bill of attainder—a legislative act inflicting punishment on an individual without trial. It was, rather, analogous to a law disqualifying a person convicted of a felony from engaging in a profession.

One circuit judge dissented for reasons which included the following:

(1) The act was a denial of freedom of speech and belief and freedom of assembly; no political belief was outside this constitutional guaranty.

(2) In the guise of withholding certain privileges to noncomplying unions, the act withheld benefits which were in reality the lifeblood of a labor union. Congress had attempted to do indirectly what it could not do directly.

(3) The act denied to employees of noncomplying unions the constitutional rights of self-organization, choice of their own bargaining representative, and election of their own union officers. These rights existed prior to enactment of the National Labor Relations Act of 1935.

(4) Employees' and union officers' rights were dependent, not only on their own compliance with the act, but upon the compliance of other officers of all the local and the national or international unions. At least, national or international union's officers could not easily be dislodged by members of the local.

(5) The act was vague and uncertain as to its meaning, so that union officials would be apprehensive about signing the affidavit. There was disagreement as to the meaning of "officers" of a union. The term "member of the Communist Party" was not defined, and the meaning of "support" or "affiliation" was also uncertain.

Representation Elections—Economic Strikers. The NLRB ruled¹⁰ that economic strikers, permanently replaced by other workers, have no right to vote in a representation election. Section 9 (c) (3) of the amended National Labor Relations Act provides that employees on strike not entitled to reinstatement shall not be eligible to vote in such an election. The Board pointed to a previous United States Supreme Court decision¹¹ in which economic strikers who had been permanently replaced were held not entitled to reinstatement.

⁹ *In re Pipe Machinery Company* (79 NLRB No. 181, Oct. 13, 1948).

¹¹ *NLRB v. MacKay Radio & Telegraph Co.* (304 U. S. 233).

The striking union urged that such an interpretation would be used by employers as a device for strike breaking, thus nullifying the effect of section 13, of the act, which preserves the right to strike. Since section 13 preserves that right "except as specifically provided for herein," the Board held, the union's argument should be addressed to Congress, rather than to the Board.

In considering whether the strikers had been permanently replaced, the following factors were held to be determinative: (1) The employer, after resuming operations, had attempted to induce the strikers to return to work. (2) He had subsequently advised them that if they did not, others would be hired to fill their places. (3) The strikers had made no unconditional application for reinstatement. (4) The employer in good faith told the new employees they were permanent. (5) The new employees had been previously employed in similar work in the same area in which the plant was located.

Elections—Interference by Employer. Prior to a representation election, the employer's officers called each employee individually into their offices and expressed the hope that an outside union would not be elected the bargaining representative of a certain section of employees. The officers stated that the employer would abide by the decision of the majority, but that they thought the employees were well represented by an independent union and that it was preferable to have only one bargaining representative for the whole plant.

The NLRB ruled¹² that the employer's conduct did not justify setting aside the election. The case of *General Shoe Co.*,¹³ in which an election was set aside because an employer had intemperately denounced a union before groups of employees specially called into his office, was distinguished from the instant case. The employer's position was expressed temperately in the instant case and supervisors were not sent to employees' homes to talk about the election, as in the *General Shoe Co.* case. The Board, therefore, concluded that the officers' statements did not unduly influence the employees, in view of the long history of collective bargaining at the plant.

Two Board members dissented, one on the ground that there was no distinction from the

General Shoe Co. case, the other because the essence of the employer's interference was in the manner rather than the content of communication to the employees. Calling on employees individually, it was pointed out, was a more subtle form of interference than group interviews.

Appropriate Unit. A well-defined segment of manufacturing plant may be designated as appropriate bargaining unit, NLRB ruled,¹⁴ although only a part of the plant's employees are skilled, and workers elsewhere in the plant possess skills and perform jobs comparable to those in the unit. While the toolroom employees in plant manufacturing farm implements did not form any craft, they were under separate supervision, with almost no interchange of employees with other parts of the plant. They were paid on an hourly basis, while most of the other plant employees were paid on a piece-work basis. In general they received higher pay than other employees. There was no prior history of bargaining.

Union Security Referendum. A union-shop authorization election, the NLRB ruled,¹⁵ may be held although the petitioning union and employer entered into a collective-bargaining agreement less than 2 months prior to the election. According to section 9 (e) (1) of the amended National Labor Relations Act, the only prerequisites to holding a union-shop election are (1) that at least 30 percent of the employees in the shop have indicated a desire for a union-security agreement; (2) that no question of representation exists; and (3) that no valid election to grant or rescind authority for a union shop has been held within the past 12 months. All of these conditions had been fulfilled.

Private Injunction Against Termination of Agreement. A collective-bargaining agreement had been entered into between a union and an employer. By the terms of the contract and by section 8 (d) (1) of the amended National Labor Relations Act, either party could terminate the contract on 60 days' notice in writing. A letter from the union to the employer suggested that amendments to the contract and several changes including an increase in wages be considered

¹² *In re Mallinckrodt Chemical Works* (79 NLRB No. 184, Oct. 15, 1948).

¹³ See Monthly Labor Review, July 1948 (p. 57).

¹⁴ *In re International Harvester Co.* (79 NLRB No. —, Oct. —, 1948).

¹⁵ *In re Utah Wholesale Grocery Co.* (79 NLRB No. 195, Oct. 18, 1948).

pproximately 3 months later, after an exchange of letters, the employer notified the union that it was terminating the contract forthwith. The union brought injunction proceedings in a Federal district court to prevent the employer from taking such action.

The court granted the injunction,¹⁶ holding that the employer was not justified in terminating the contract, since neither the union's letter nor other negotiations could be considered an exercise of the 60-day option to terminate. The injunction was held justified by section 301 of the Labor Management Relations Act, which provides (1) that suits for violation of contracts between an employer and a labor organization may be brought in a Federal district court having jurisdiction of the parties, and (2) that any such labor organization may sue or be sued in its own name. The injunction was not prevented by the Norris-GaGuardia Anti-Injunction Act, since no labor dispute was involved. There was no strike nor violence. An injunction in this instance was held not to be the type of evil which that act was designed to prevent. There was no adequate remedy at law, since it was impossible to measure or compensate in money damages loss caused by termination of grievance procedures, arbitration, or neck-off. Equitable relief was therefore appropriate. Cases denying an injunction preventing unfair labor practices were distinguished from this case on the ground that the NLRB was given exclusive jurisdiction to prevent them. In the instant case, the court pointed out, no unfair labor practice was involved.

Veterans Reemployment

In-grade Increases in Relation to Seniority. A federal district court¹⁷ decided that a reemployed veterans' pay must include any in-grade increases which he almost certainly would have received on the basis of seniority if he had not been in the service.

The veteran, who entered the service from a chauffeur's position at the minimum rate, was reinstated at the minimum rate effective at the time of restoration, which included general wage increases as applicable. He continued in the employment for 17 months.

The chauffeur classification had six step-grades in pay. The employer, in January and July of each year, determined who should receive in-grade increases. Employees who had less than 1 year of service, or who at the last wage-review date had received an in-grade increase, were not eligible. Employees might be raised more than one step at a time for special merit. The in-grade increases, the employer contended, were awarded solely on a merit basis.

Evidence as to the employer's actual practice during the veteran's absence in the service showed that, although eligible chauffeurs were sometimes passed over on the first wage-review date, few of them were passed over again on the next wage-review date. The court found that employees were "practically certain" to be advanced after 18 months of employment or 18 months in a step-grade. The "overwhelming probability," therefore, was that the veteran would have received an in-grade increase each time he had been eligible on two successive wage-review dates, if he had not been in the service. No special practice as to in-grade increases for employees on furlough or leave of absence was shown.

In adjudging the veteran underpaid, the court referred to decisions in which veterans were held not entitled to in-grade wage increases (or to promotions) given other employees during the veteran's absence, unless based solely on seniority. Even if increases are, in theory, granted partly on merit and partly on seniority, it was pointed out, the employer's practice may show an overwhelming probability that all employees in a class would be given advancement at a determinable minimum rate during the veteran's military service. If this is true, the determinable minimum rate of progress is an attribute of seniority. The veteran must, therefore, be restored without loss of seniority and credited with time spent in the service; he may not be denied the benefit of higher pay which is linked closely with seniority.

Damages awarded included the entire 17 months immediately following the veteran's reinstatement, the court refusing to hold that the veteran, at the end of the first year of reemployment, was entitled only to the rate actually paid him. To rule otherwise, said the court, would permit the employer to discriminate against the employee as a veteran, "by pushing him back down the escala-

¹⁶ *Communications Workers v. Telephone Co.* (U. S. D. C., D. Colo., Aug. 1948).

¹⁷ *Gennicello v. Atlantic Refining Co.* (U. S. D. C., D. Conn., Sept. 17, 1948).

tor, so that the seniority gained by his military service would be wiped out for all time to come."

Decisions of State Courts

Georgia—Injunction Held To Prohibit Abusive Language by Pickets. An injunction restrained a union and certain striking employees from preventing, or attempting to prevent, by threats, intimidation, or violence, an employer from engaging in business or any person from working for him. As amended, the order allowed peaceful picketing. Certain pickets were indicted for using threats and intimidation in violation of the court's order. These pickets had called employees working at the struck plant "scabs" and other opprobrious epithets. It was alleged that such abuse caused the employees to quit their jobs. The name-calling and general abuse uttered under such circumstances, the appellate court¹⁸ held, constituted a threat of physical violence. A few days after one such episode, one of the worker's homes was dynamited.

In ruling that the pickets were guilty of contempt, the appellate court held that words might be just as effective as acts in accomplishing intimidation. As to violation of a court order, the guaranty of freedom of speech was considered subordinate to the integrity of the courts and the inviolability of their judgments. There was no direct proof that certain pickets had "knowingly" disobeyed the court order. A union officer's testimony that headquarters had instructed the pickets to obey the law was held to be sufficient evidence of their knowledge of the order.

Pennsylvania—Act Prohibiting Picketing by Non-Employees Held Unconstitutional. Section 2 (d) of the Pennsylvania Labor Relations Act makes it an unfair labor practice for a labor union or employees acting in concert to picket a place of employment of which they are not employees or to cause it to be picketed by persons not its employees. A lower court¹⁹ held section 2 (d) unconstitutional on the ground that it violated the fourteenth amendment.

A nonunion mine was picketed by union organiz-

ers of the United Mine Workers and also by miners at a nearby mine owned by the same employer. The nearby mine had been organized by the union. The picketing commenced when the employer refused to sign a contract with the union covering the nonunion mine. The State Labor Relations Board ordered the union to cease picketing, on the ground that it violated the act and requested the court to enforce its order.

The court held that to prevent peaceful picketing by nonemployees would be a violation of the constitutional guaranty of freedom of speech and the press. Cases prohibiting mass picketing or labor violence were distinguished from those involving only peaceful persuasion. The United States Supreme Court,²⁰ it was pointed out, had ruled that "a State cannot exclude workingmen in a particular industry from putting their case to the public in a peaceful way by drawing the circle of economic competition between employer and workers so small as to contain only an employer and those directly employed by him." The Board had made no finding that the picketing was for an unlawful purpose, and allegations as to violence and intimidation had been withdrawn.

Tennessee—Injunction Limiting Picketing Valid. A State appellate court²¹ upheld a verdict of contempt of court against pickets who violated an injunction prohibiting loitering or picketing within 100 yards of a struck plant. The injunction also prohibited interference with employees or prospective employees of the plant by threats, violence, or other means intended to deter the employees from carrying out their duties. Peaceful picketing by limited numbers was permitted. The injunction was granted on the basis of allegations that pickets had greased railway tracks into the employer's plant, placed nails on the employer's premises where automobiles traveled, and performed other acts constituting destruction of property.

Peaceful picketing lawfully conducted was an exercise of the right of free speech, the court held, but picketing destructive of the rights and property of others lost its significance as an appeal to reason. Therefore, the injunction was valid.

¹⁸ *Lassiter v. Swift & Co.* (Ga. Supr. Ct., Oct. 11, 1948).

¹⁹ *Pennsylvania Board v. Adams* (Pa. C. P., Mercer Co., Sept. 10, 1948).

²⁰ *American Federation of Labor v. Swing* (312 U. S. 321).

²¹ *United Steelworkers v. Nashville Corp.* (Tenn. Supr. Ct., Oct. 16, 1948).

Chronology of Recent Labor Events

October 12, 1948

THE GENERAL COUNSEL of the National Labor Relations Board announced postponement of plans to hold union-shop referenda covering unionized building and construction industry workers, which had been announced in February. (Source: Labor Relations Reporter, vol. 22, p. 334.)

October 13

THE SECRETARY OF LABOR, under the Public Contracts Act, determined minimum wages on public contracts in the men's hat and cap industry, except fur felt hats, to be 85 cents an hour (formerly 67½ cents) for skilled workers, and 60 cents an hour (formerly 40 cents) for auxiliary workers, effective November 16. (Source: Federal Register, vol. 13, p. 6081.)

The Secretary of Labor determined minimum wages on public contracts in the textile industry to be 87 cents an hour (formerly 40 cents), effective November 16. (Source: Federal Register, vol. 13, p. 6083.)

October 14

THE FEDERAL DISTRICT COURT for Southern Indiana found the International Typographical Union (AFL) and four of its officers in contempt of court, owing to its insistence upon maintenance of closed shop conditions in contracts with newspaper publishers, notwithstanding an injunction (March 27) banning such practices. (Source: Labor Relations Reporter, Analysis, vol. 22, No. 49, p. 97; for discussion, see MLR, Nov. 1948, p. 518.)

On October 18, a Federal Circuit Court Judge in Chicago granted a stay in the contempt order. (Source: Labor Relations Reporter, vol. 22 LRR, p. 347.)

On November 10, the same United States Circuit Court vacated the stay. (Source: Labor Relations Reporter, vol. 23 LRR, p. 32.)

October 17

THE NLRB, in the case of *Pipe Machinery Co. and International Association of Machinists* (Ind.) ruled that "economic strikers" (workers whose strike was not due to unfair labor practices), who had been replaced per-

manently, were not entitled to vote for a bargaining agent. (Source: NLRB release R-130, Oct. 17, 1948.)

October 18

AN NLRB TRIAL EXAMINER, in the case of *Cory Corp. and United Electrical, Radio & Machine Workers of America (CIO)*, its local 1150, and 13 local and international officials and pickets, held that the workers were in violation of the LMRA of 1947 by reason of the coercive effect of their mass picketing. (Source: NLRB release R-131, Oct. 18, 1948.)

October 19

THE NLRB, in the case of *Itasca Cotton Manufacturing Co. and Textile Workers' Union of America (CIO)*, ruled that section 10 (b) of the LMRA of 1947 (which act amends the NLRA of 1935) imposes no limitation upon the issuance of complaints charging unfair labor practices, in any case in which the charges were filed and served within 6 months after the effective date of the amendments to the act (i. e., by Feb. 22, 1948). (Source: Labor Relations Reporter, vol. 23 Summary, p. 3, and LRRM, p. 1021.)

AN NLRB TRIAL EXAMINER, in the case of *Ernest Fritz, Jr.*, truck driver, against *H. M. Newman*, operator of a petroleum trucking firm, and *Local 458 of the International Brotherhood of Teamsters (AFL)*, held both the employer and the union in violation of the LMRA of 1947 for lay-off of the employee, who fell behind in his union dues and refused to go personally to the union office to obtain his reinstatement in good standing. (Source: NLRB release R-132, Oct. 19, 1948.)

October 21

THE ACTING SECRETARY OF LABOR, in conformity with the decision of the United States Supreme Court on October 11 on overtime (see Chron. item for Sept. 14, 1948, MLR, Nov. 1948), issued a regulation under the Public Contracts Act, whereby he specified that the rate of overtime compensation on public contracts should be one and one-half times the basic hourly rate of the employee. (Source: Federal Register, vol. 13, p. 6214.)

October 25

THE NLRB issued a ruling concerning the strike in the autumn of 1947 of Local 6 of the International Longshoremen's and Warehousemen's Union (CIO) at the Sunset Line & Twine Co., Petaluma, Calif., whereby the union was unanimously found guilty of unfair labor practices, under the LMRA of 1947, in mass picketing and related acts of coercion. (Source: NLRB release R-135, Oct. 25, 1948.)

THE PRESIDENT OF THE American Federation of Labor announced the appointment of George Philip Delaney, of the International Molders and Foundry Workers Union,

as International Representative of the AFL. In this capacity, he replaces the late Frank P. Fenton who died on August 9 (see MLR, Sept. 1948, p. 266, footnote 8) and will sit on the Governing Body of the International Labor Organization. (Source: AFL release, Oct. 25, 1948.)

October 26

THE UNITED STATES Department of Labor announced that inductees under the Selective Service Act of 1948 (see Chron. item for June 24, 1948, MLR, Aug. 1948) may extend their required 21-month term of military service for 15 more months without loss of their reemployment rights. (Source: U. S. Law Week, 17 LW, p. 2190.)

October 28

THE NLRB, in the case of *Advance Pattern Co. and Printing Specialties and Paper Converters Union No. 362 (AFL)*, voted 3 to 2 that a representation petition under the LMRA of 1947 need not show on its face that the petitioner requested and that the employer refused recognition before the petition was filed. (Source: Labor Relations Reporter, vol. 23, LRRM, p. 1022.)

October 31

THE PRESIDENT appointed Ralph Wright of the International Typographical Union (AFL) as Assistant Secretary of Labor. (Source: U. S. Dept. of Labor Release S49-454, Nov. 1, 1948.)

November 2

PROPOSALS TO OUTLAW all forms of union-security contracts submitted to the electorate in Arizona were adopted. Rejected by voters in Massachusetts was a "right to work" measure and in New Mexico an "open shop" amendment. (Source: Labor Relations Reporter, vol. 23, LRR, p. 15; for discussion, see MLR, Nov. 1948, p. III.)

November 3

THE UNITED STATES Atomic Energy Commission released a letter directing the General Electric Co. "to withdraw and withhold recognition from the United Electrical, Radio, and Machine Workers of America, CIO, * * * on work at AEC-owned or AEC-leased installations in the Schenectady area or engaged on atomic work which is defined as classified." Attention was directed to the failure of UE officers either to sign the non-Communist affidavits under the LMRA of 1947, in two atomic energy plants (see Chron. item for Sept. 29, 1948, MLR, Nov. 1948) or to avail themselves of the opportunity for further discussion. The chairman said "it appears that the officers do not intend to answer questions or submit facts concerning their loyalty." (Source: AEC release of Nov. 3, 1948.)

On November 8, the Congress of Industrial Organizations announced that it was joining in the suit filed by the UE (CIO) in the Federal District Court in Washington, D. C. (Oct. 2) against the AEC and the General Electric Co. asking (1) a million dollars damages for breach of contract and (2) an injunction against the blacklisting of the UE in atomic energy plants. (Source: Business Week, Nov. 6, 1948, and New York Times, Oct. 27 and Nov. 9, 1948.)

November 5

AN NLRB TRIAL EXAMINER, in the case of *Local 780 of International Brotherhood of Electrical Workers (AFL) v. Roane-Anderson Co.*, in the first ruling of the kind, held that when 114 out of 115 employees quit work individually within 36 hours, it constituted a strike under the LMRA of 1947. He ruled, however, that a union's responsibility for such a strike, if illegal, must be proved independently. (Source: NLRB release R-136, Nov. 5, 1948.)

THE NLRB, in the case of *C. Hager and Sons Hinge Manufacturing Co. and United Steel-Workers of America (CIO)*, ruled unanimously that a union shop contract entered into by the two parties on August 22, 1947, without holding the required election under the LMRA of 1947, was illegal. (Source: U. S. Law Week, Vol. 17, LW, p. 2207.)

November 8

A UNITED STATES COURT OF APPEALS unanimously upheld an injunction, issued under the LMRA of 1947, restraining local 1250 of the Department Store Employees Union (Ind.) (see Chron. item for Oct. 9, 1948, MLR, Nov. 1948) from picketing the stores of Oppenheim Collins and Company. (Source: New York Times, Nov. 9, 1948.)

November 10

THE FEDERAL DISTRICT COURT at Washington, D. C., dismissed the injunction issued on June 4 (see Chron. item for May 18, 1948, MLR July 1948) against John L. Lewis and the United Mine Workers of America (Ind.). The court had issued the injunction on charges by the Southern Coal Producers Association that the union refused to bargain with them on a new contract for bituminous mines. (Source: Labor Relations Reporter, Vol. 23 LRRM, p. 32.)

November 11

THE NLRB, in the case of *Perry Norvell Co.*, who had been bargaining since 1934 with Local 613 of the Boot & Shoe Workers Union (AFL), ruled that a strike during the term of a contract by a group which was a rival to the contracting union was not in itself an unfair labor practice under the LMRA of 1947, since the contracting union had not been certified by the NLRB. (Source: NLRB release R-138, Nov. 12, 1948.)

Publications of Labor Interest

Special Reviews

Trade Union Wage Policy. By Arthur M. Ross. Berkeley and Los Angeles, University of California Press, 1948. 133 pp. \$3.

Attempts at reformulating wage theory have been characteristic of each new generation of economic thought during the past century. Trade-unionism and its effects upon wages have been increasingly difficult phenomena for theory to explain and absorb. At the present time, there is still a large body of opinion which relegates to trade-unionism and collective bargaining the resolution of essentially minor matters within the iron bounds of economic laws or principles. According to other opinion, however, such generalizations can no longer be made without intensive examination of the operation and effects of wage determination under trade-unionism. Arthur Ross, of the latter group, has made a substantial contribution to the analysis and summarization of much of the existing material in the field.

Ross' approach, like that of other labor economists writing today, goes beyond the narrow confines of the discipline of economics. It embraces the fields of political science, sociology, and psychology, where they can be focused upon the inquiry. It is distinctly institutional in approach; in writing, the style is frequently reminiscent of that of Thorstein Veblen.

No attempt has been made to formulate a theory of wages; the author regards his work as one of several parts which would be essential for this task. Many of his observations are, however, directed at points of theory: generally to shed doubt upon the validity of established precepts. Whether a theory of wages generally acceptable to labor economists will ever be formulated is open to debate. Contributions like the present book will make the task possible, if it can ever be done, and will certainly make easier the task of the Social Science Research Council group that has been considering the problem for the past two years.

Notable among the newer material in the volume is the final chapter, "The Influence of Unionism Upon Earnings," which will probably give rise to significant debate

in the academic journals. Taking issue with the methodology and the conclusions of Paul H. Douglas in the latter's *Real Wages in the United States, 1890-1928*, Mr. Ross concludes that unionism has had a significantly greater effect upon earnings than has hitherto been recognized. Whatever the ultimate fate of his conclusions, his presentation of the significance of cents-per-hour versus percentage measures of wage movement is a welcome addition to the literature.

—P. A.

The Foreman in Industrial Relations. By Robert David Leiter. New York, Columbia University Press, 1948. 200 pp., bibliography. (Studies in History, Economics, and Public Law, No. 542.) \$2.50.

In direct relationship to management, foremen must be considered employees. In their duties and functions as supervisors, they are the agents of management in translating its policies and programs into action and production; they have to deal with all the problems involved in management-labor relations. This is the dualism out of which arises one of the most controversial issues in industrial relations, the foreman and collective bargaining. This controversy epitomizes, to some degree, the entire struggle of labor to achieve collective bargaining rights under law, for the foreman's problem in industrial relations is that he does not have the same legal protection as other workers in securing recognition from his employer and in his right to bargain collectively.

"The Foreman in Industrial Relations" attempts to place the present controversy over the supervisor and collective bargaining in its proper economic, historical, and legal perspective. It is based not only on printed records but also on extensive field studies.

The author first considers the present status of foremen in the United States, tracing the development of their functions, emphasizing their relationship to both labor and management, and outlining the acute problems arising from this dual status. He concludes that independent unions of foremen would best resolve the situation. Such a solution, he argues, meets the objections of employers who contend that a foreman cannot represent them effectively when he is a member of a union with which the workers whom he supervises are affiliated; and it should satisfy foremen who argue that individual bargaining has not been successful in advancing their interests. He also points out that the Taft-Hartley Act excludes foremen from the protection granted to other workers and makes them entirely dependent upon their own economic strength to compel employer recognition, which may, in the future, cause increased industrial strife, since foremen may be forced to call upon rank and file unions for help in gaining their objectives.

The second section of the book describes the history of the unionization of foremen, both in independent unions and in affiliates of rank and file unions. Considerable attention is devoted to the printing, maritime, and railroad industries, where foremen's unions date back to the 19th century. The recently organized unions of foremen, particularly those in the automobile industry and in the coal fields, are described and analyzed in detail. The author shows that no unusual problems have developed in those

Editor's Note.—Correspondence regarding the publications to which reference is made in this list should be addressed to the respective publishing agencies mentioned. Where data on prices were readily available, they have been shown with the title entries.

industries where foremen have been unionized for long periods, but that in these cases satisfactory adjustments have been worked out.

An examination of the effects of Federal and State labor laws, such as the National Labor Relations Act, Railway Labor Act, and Taft-Hartley Act, upon the status of the foreman, and their impact on unionization of foremen, concludes the volume.—A. W.

Absenteeism

Illness Absenteeism in Manufacturing Plants, 1947. By Frank S. McElroy and Alexander Moros. Washington, U. S. Bureau of Labor Statistics, 1948. 5 pp., chart. (Serial No. R. 1936; reprinted from Monthly Labor Review, September 1948.) Free.

Report for the year 1947; data for the first 6 months were published in the March 1948 Monthly Labor Review and reprinted as Serial No. R. 1919.

Studies in Occupational Morbidity. By Ian Sutherland and G. P. S. Whitwell. (In British Journal of Industrial Medicine, London, April 1948, pp. 77-87. 7s. 6d.)

Analysis of sickness and injury absenteeism in two British factories during 1946. Data are given for both production and nonproduction workers, as well as separately for the clerical staff.

Child and Youth Employment

Safeguard Working Boys and Girls. By Elizabeth S. Johnson. (In The Child, Federal Security Agency, Social Security Administration Children's Bureau, Washington, September 1948, pp. 42, 43. 10 cents, Superintendent of Documents, Washington.)

This article points out the importance of community action to assure the safety of young workers and to prevent their employment in hazardous occupations.

Teen-Agers at Work. By Elizabeth S. Johnson. (In The Child, Federal Security Agency, Social Security Administration, Children's Bureau, Washington, October 1948, pp. 55-58, charts. 10 cents, Superintendent of Documents, Washington.)

Why Child Labor Laws? By Lucy Manning. Washington, U. S. Department of Labor, Bureau of Labor Standards, 1948. 15 pp., map charts, illus. (Bull. No. 96.) Free.

Summaries of existing Federal and State laws and of needed additional provisions, as well as reasons for child-labor legislation, are set forth.

Cooperative Movement

The Cooperative Movement at Home and Abroad. By Hebe Spaull and D. H. Kay. London, Macmillan & Co., Ltd., 1947. 191 pp., illus. 4s.

Among the most interesting features of this book are the chapters on cooperatives in parts of the world not generally treated in cooperative reports—Labrador, South Africa, West Africa, and India.

The Second Hundred Years of Cooperatives. By G. Talbott Edwards. Denver, Colo., Farmers Educational and Cooperative Union of America, 1947. pp., illus.

Intended for classes studying cooperatives, this pamphlet describes what cooperatives are, how they operate, and what they can accomplish, with especial reference to farmers.

Frozen Food Locker Cooperatives in Illinois, 1947. By P. C. Wilkins and L. B. Mann. Washington, U. S. Department of Agriculture, Farm Credit Administration, Cooperative Research and Service Division, 1948. 39 pp., map, charts; processed. (Miscellaneous Report No. 122.)

The purpose of this report is to provide information on the relative efficiency and success of locker associations of individual plants. It gives an analysis of the income, expenses, savings, labor and management efficiency, etc., of 33 cooperatives operating 87 plants in Illinois.

Montana Farmer Cooperatives, 1941 and 1948. By Harry F. Hollands. Bozeman, Montana State College Agricultural Experiment Station, 1948. 55 pp., map, chart, illus. (Bull. No. 449.)

This bulletin covers 257 cooperatives, of which 137 were consumers' cooperatives (99 petroleum, 17 store, 3 cotton storage, 1 lumber yard, and 17 electricity associations) and the rest were farmers' marketing and processing cooperatives. In addition to data on capitalization, business done, management, educational programs, etc., the report lists the associations, with kinds of business carried on.

Dictionary of Cooperation (Including Encyclopedic Materials). By Emory S. Bogardus. Chicago, Cooperative League of the USA, 1948. 94 pp. 3d ed. 25 cents.

Besides being a dictionary in the ordinary sense of defining the meaning of the terms used in the cooperative movement, this pamphlet also contains much biographical material on cooperative workers and leaders, and information on cooperative periodical publications and cooperatives (as well as central federations) here and abroad.

Cost and Standards of Living

Cost of Living Survey, June 1948. Augusta, Maine, Department of Labor and Industry, 1948. 15 pp., processed.

Presents an annual and weekly minimum budget for self-supporting single persons in Maine.

Postwar Changes in the Quality of Apparel. Washington, U. S. Bureau of Labor Statistics, 1948. 6 pp. (Serial No. R. 1935; reprinted from Monthly Labor Review, July 1948.) Free.

Budgets de Familles de Salariés de la Région Parisienne, 1946. (In Bulletin de la Statistique Générale de France, Paris, supplément April-June 1948, pp. 11-175, charts. 200 fr.)

Results of two family expenditure studies conducted in Paris in March and April 1946 and November 1946.

National Institute of Statistics and Economic Studies. A total of 1,354 workers' families submitted usable questionnaire account books in the first study and 960 in the second. Tabulations show expenditures of all families and classifications according to family size. More than 50 percent of the expenditures were for food and less than 2 percent for rent. Data on quantities of food consumed and nutritional content are also presented. No information is given on family incomes. The Institute noted limitations of the study, especially in regard to the inadequate representation of lower-income families.

Increase in the Middle-Class Cost of Living, [Great Britain], Since Before the War. By Dudley Seers. (In Bulletin of the Oxford University Institute of Statistics, Oxford, England, July and August 1948, pp. 255-268. 2s. 6d.)

The author presents an index of middle-class expenditures, using weights derived from his study (Oxford University Institute of Statistics Bulletin, June 1948) of the working-class share in prewar consumption, and shows how it can be kept up to date by linking it to the official interim index of retail prices. He also estimates changes in cost of living of different sections of the middle class, and indicates the movement of indexes for various groups in different periods between 1938 and 1948.

Disability Insurance

California Disability Insurance Program. Washington, Federal Security Agency, Social Security Administration, Bureau of Employment Security, 1948. 41 pp.; processed. (Attachment to General Administration Letter No. 104.)

Disability Protection Under Public Programs. By Dorothy F. McCamman. (In Social Security Bulletin, Federal Security Agency, Social Security Administration, Washington, June 1948, pp. 4-13, 23. 20 cents, Superintendent of Documents, Washington.)

Summary discussion of existing public social-security systems in the United States which compensate for prolonged or permanent total disability, and of the extent of their coverage.

Provision for Permanent Disability. By Carl W. Strow. Chicago, Research Council for Economic Security, 1948. 11 pp. (Publication No. 32.)

Envisages the problem on a national basis, but suggests alternate plans, one of which is a State system.

Sick Pay in Industry: How Many Are Protected Against Wage Loss When Sick? Chicago, Research Council for Economic Security, 1948. 10 pp., charts. (Publication No. 43.)

Education and Training

Industrial Training—A Guide to Selected Readings. By John M. Brophy and I. Bradford Shaw. Ithaca, N. Y., Cornell University, New York State School of Industrial and Labor Relations, August 1948. 32 pp. (Extension Bull. No. 1.) 10 cents.

The Training of College Graduates in Industry. By Bernard J. Koehler. Philadelphia, National Office Management Association, 1948. 40 pp., bibliography. (Survey Summary No. 5.)

Of 124 companies which returned the questionnaire used in this survey, 58 (the majority engaged in manufacturing) were conducting training programs for college graduates. The report summarizes findings of the survey and reproduces the questionnaire.

Principles of Vocational Education—the Primacy of the Person. By Franklin J. Keller. Boston, D. C. Heath & Co., 1948. 402 pp. \$3.50.

Jewish Vocational Education: History and Appraisal of Training in Europe. By Bernard D. Weinryb. New York, J. T. S. P. University Press, 1948. 189 pp., bibliography. \$2.25 (\$2, paper cover).

Account of Jewish vocational education and occupational redistribution in European countries in the century and a half ending with World War II.

Housing

Housing—Developments in 1947. By Dorothy Gazzolo. (In Municipal Year Book, 1948, pp. 278-291, bibliography, chart. Chicago, International City Managers' Association, 1948. \$9.)

A Housing Program for Now and Later. Washington, National Public Housing Conference, 1948. 60 pp. 25 cents.

Statement of principles and programs regarding housing made by a joint committee of the National Association of Housing Officials and the National Public Housing Conference.

The Housing Situation: The Factual Background. Washington, U. S. Housing and Home Finance Agency, 1948. Variously paged; processed.

Draws on existing statistics to show the amount of housing available in April 1947 and the changes that have taken place in recent years with respect to home ownership, improvements in housing quality, crowding, and related characteristics. The volume is supported by numerous tables, which include regional data.

Byggnadsverksamheten i Sverige dr 1948. Stockholm, Socialstyrelsen, 1948. 67 pp.

Survey of housing construction and other activities of the building industry in Sweden in 1948. In Swedish with a summary in French and a French translation of the table of contents.

Income

State Income Payments in 1947. By Charles F. Schwartz and Robert E. Graham, Jr. (In Survey of Current Business, U. S. Department of Commerce, Bureau of Foreign and Domestic Commerce, Washington, August 1948, pp. 10-21, charts. 25 cents, Superintendent of Documents, Washington.)

State and regional figures are presented for aggregate payments, for selected components such as agricultural

income and trade and service income, and for types of payments (wages and salaries, proprietors' income, property income, and other income). Per capita payments are given by State and region, 1929-47. Changes in the percentage distribution of aggregate payments are shown by State and region, with emphasis on wartime and post-war regional gains and losses. The estimates were made on the basis of concepts and methods differing from those now used in the making of estimates of gross national product, national income, and personal income. Revisions of the State series in conformity with the new concepts and methods have not as yet been completed.

Renta Económica de la Provincia de Buenos Aires, 1945-47.

La Plata, Argentina, Ministerio de Hacienda, Economía y Previsión, Dirección General de Estadística e Investigaciones, Instituto de Econometría, 1948. 55 pp. (Cuaderno de Estudios, No. 1.)

Discusses the economic concepts of gross income, net income, real and money income, and distribution of income, with frequent reference to the work of such authors as Kuznets, Mendive, Wagemann, Haberler, and Keynes. Tabulations provide an analysis of sources and distribution of the income of the Province of Buenos Aires for the years 1945, 1946, and 1947.

National Income and Expenditure of the United Kingdom, 1947. London, H. M. Stationery Office, 1948. 49 pp. (Cmd. 7371.) 1s. net.

Includes quarterly data on the national wage bill.

Official Estimates of National Income, [New Zealand], 1938-39 to 1947-48. Wellington, Census and Statistics Department, 1948. 23 pp., charts. (Supplement to Monthly Abstract of Statistics, June 1948.)

Break-downs show salary and wage payments, social security benefits and pensions, rental value of owner-occupied houses, and other major sources of income.

Industrial Accidents and Accident Prevention

Accident Facts, 1948 Edition. Chicago, National Safety Council, 1948. 96 pp., charts. 50 cents.

Facts about home, farm, occupational, and motor vehicle and other public accidents, in 1947 and earlier years.

Measure Safety; Injury Frequency Rates. Washington, U. S. Department of Labor, Bureau of Labor Standards, 1948. 6 pp. (Bull. No. 102.) 5 cents, Superintendent of Documents, Washington.

The Joint Safety Program of the Forstmann Woolen Co. and Local 658, Textile Workers Union of America, CIO. New Brunswick, N. J., Rutgers University, Institute of Management and Labor Relations, 1948. 47 pp. (Case Studies of Co-operation Between Labor and Management, No. 1.)

Case study of a successful union-management safety program which has resulted in an "unusually low level" of accidents.

Safety in Sandblasting—A Manual. By Industrial Hygiene Foundation of America, Inc. Washington,

National Industrial Sand Association, 1948. 32 pp., diagrams, illus. \$1.

Industrial Disputes

Work Stoppages Caused by Labor-Management Disputes in 1947. Washington, U. S. Bureau of Labor Statistics, 1948. 22 pp., charts. (Bull. No. 935.) 20 cents, Superintendent of Documents, Washington.

Work Stoppages, New York State, 1947: A Survey of Characteristics, Workers Involved, and Time Lost in New York State During the Year. New York, State Department of Labor, Division of Research and Statistics, 1948. 20 pp.; processed.

Some International Aspects of the Strike Movement: The Results of Labor Disputes. By K. Forchheimer. (In Bulletin of the Oxford University Institute of Statistics, Oxford, England, September 1948, pp. 294-304, charts. 2s. 6d.)

Analysis, for varying periods back to 1880, of the situation in five countries—France, Germany, Sweden, United Kingdom, and the United States.

The first part of the study, on the strength of the movement, was published in the January 1948 issue of the Bulletin (noted in the August 1948 Monthly Labor Review, p. 177). It covered the five countries mentioned above, and Canada.

Statistiek der werkstakingen en uitsluitingen, 1947. The Hague, Centraal Bureau voor de Statistiek, 1948. 21 pp., chart; processed.

Statistics of strikes and lock-outs in the Netherlands in 1947.

Industrial Hygiene

Health of Workers Exposed to Sodium Fluoride at Open Hearth Furnaces. Washington, Federal Security Agency, Public Health Service, 1948. 64 pp., illus. (Public Health Bull. No. 299.) 25 cents, Superintendent of Documents, Washington.

Hygiene Conference Sponsored by Metallic Lead Product Division, Lead Industries Association, March 16, 1948. New York, Lead Industries Association, 1948. 21 pp., charts, forms, illus.

Industrial Health—A Guide for Medical and Nursing Personnel. [Madison?], State Medical Society of Wisconsin and State Board of Health, 1948. 48 pp., diagrams, illus.

Safety for Laboratory Technicians. By Samuel Moskowitz. (In Monthly Review, Division of Industrial Hygiene and Safety Standards, New York State Department of Labor, New York, August 1948, pp. 29-32, illus.)

Utah Minerals and their Toxicological Significance. [Salt Lake City], State Department of Health, Division of Industrial Hygiene, 1947. 27 pp.

Industrial Relations

Unions, Management, and the Public. Edited by E. Wight Bakke and Clark Kerr. New York, Harcourt, Brace & Co., 1948. 946 pp. \$5.

Compilation of selected readings on trade-union activities, labor relations and policies, and other aspects of the labor situation in the United States. The selections were made with the purpose of revealing issues and facts providing the "stimulus and essential information for discussion of the problems." A wide range of sources are tapped, including writings of American and European students of trade-union activities, and passages from the speeches or writings of trade-union leaders, government officials, and employers.

The material is grouped in five main sections. In the first section, on "Development of Unions," the reasons why workers join unions and the means by which unions develop power are treated. The philosophy of management in its handling of labor relations is discussed in a section on "Response of Management." The next two sections deal with bargaining processes and procedures and with the nature and substance of collective-bargaining agreements. The last section takes up the interest of the community in policies affecting relations between unions and employers.

Each major topic has a preface by the editors which points up the issue and at the same time lends continuity to the work.

The New Industrial Relations. By Louis M. Hacker and others. Ithaca, N. Y., Cornell University Press, 1948. 150 pp. \$2.

The wording of the title connotes developments of the last decade and a half during which the American people turned from "a passive attitude toward the right of workers to organize and bargain collectively" to "recognition of organization and enforcement of the right of workers and employers to bargain."

The papers which make up this book originated in a series of lectures delivered at Cornell University by five well-known educators and practitioners in the field of industrial relations. They deal with the impact of American institutions and modern society on industrial relations, basic elements of such relations, and problems in connection with the human factor.

Collective Bargaining Provisions: General Wage Provisions. Washington, U. S. Bureau of Labor Statistics, 1948. 97 pp. (Bull. No. 908-8.) 25 cents, Superintendent of Documents, Washington.

Collective Bargaining Provisions: Wage Adjustment Plans. Washington, U. S. Bureau of Labor Statistics, 1948. 75 pp. (Bull. No. 908-9.) 20 cents, Superintendent of Documents, Washington.

Selected Bibliography on Employee Benefit Plans Under Collective Bargaining. Washington, U. S. Bureau of Labor Statistics, October 27, 1948. 3 pp.; processed. Free.

Seniority: Problems Arising in the Administration of Seniority Regulations. Kingston, Ont., Queen's Uni-

versity, Department of Industrial Relations, 1948. 36 pp. (Bull. No. 12.) \$1.

On the assumption that employers and unions often seek different ends when negotiating seniority provisions for collective bargaining contracts, this bulletin describes the types of conflict which arise, and cites provisions of Canadian collective bargaining agreements which are designed to cope with these problems.

Shop Steward's Manual. Washington, International Association of Machinists, Research Department, 1948. 56 pp. (booklet).

A Stitch in Time. Ottawa, Department of Labor, Industrial Relations Branch, 1948. 15 pp. Free.

Report on the labor-management production committee of a Canadian company which manufactures work clothing.

Worker Morale and Productivity. New York, American Management Association, 1948. 38 pp. (General Management Series, No. 141.) 75 cents.

Three papers presented at general management conference of American Management Association, June 1948: Where Freedom Begins (Charles Luckman); A "New Look" for Management (F. J. Roethlisberger); A Backward Glance in Labor Relations (Clinton S. Golden).

Labor Legislation and Court Decisions

290 Questions and Answers on Labor Law. By Reginald Parker. New York, Central Book Co., 1947. 60 pp. \$1.

A Re-examination of Picketing and Free Speech. (In Cornell Law Quarterly, Ithaca, N. Y., September 1948, pp. 81-92.)

Reviews a number of court decisions prior to, and one subsequent to, passage of the Taft-Hartley Act.

The Mystery of the Missing Regular Rate of Pay. By Herbert Burstein. (In Lawyers' Guild Review, Washington, May-June 1948, pp. 411-422. 50 cents.)

Lack of a definition of "regular rate of pay" under the Fair Labor Standards Act has led, the writer states, to an "almost endless stream of litigation." Various cases in which uncertainty as to meaning of the term has resulted in court action are reviewed.

The Wage and Hour Law and the Building Industry After Ten Years. By J. G. Fink and L. Metcalfe Walling. [New York], Building Trades Employers' Association, 1948. 4 pp. (Special Bull., October 27, 1948.)

The Fair Labor Standards Act of 1938 was at first held to have little effect upon policies in the building industry because of the generally high wages and short workweek in that industry and the local character of most construction work. However, interpretations by the administrator of the law and various decisions of courts have shown that workers in building trades may in many instances be considered as under wage and hour law coverage. This special bulletin was prepared to aid building contractors in an understanding of the law and the interpretations and decisions in regard to its application.

Labor Management Relations Act, 1947

The Labor Management Relations Act of 1947. By Edwin A. Elliott. (In Southwestern Social Science Quarterly, Austin, Texas, September 1948, pp. 107-118. 75 cents.)

Asks a fair trial for the act in order that it may be tested, and expresses the opinion that its terms preserve and protect the institution of collective bargaining, which is in the interest of labor, management, and the public.

The Taft-Hartley Act After One Year, Including Rulings, Interpretations, Text of Act Annotated, Specimen Contract Clauses. Washington, Bureau of National Affairs, Inc., 1948. 341 pp. \$5.

The Taft-Hartley Act and Collective Bargaining: A Management Appraisal. By Selwyn H. Torff. *The Taft-Hartley Act as Viewed by Labor.* By Francis Downing. (In Illinois Law Review, Chicago, July-August 1948, pp. 323-356, 357-372.)

The Taft-Hartley Act and Multi-Employer Bargaining. By Jesse Freidin. Philadelphia, University of Pennsylvania, Wharton School of Finance and Commerce, Labor Relations Council, 1948. 41 pp. (Industry-wide Collective Bargaining Series.) 75 cents.

Although the Taft-Hartley Act does not directly regulate industry-wide collective bargaining, the author concludes that the legislation "abounds in instances of Congress' intention to give a larger voice in the making of decisions to individuals," and that provisions of the act show a "tendency to view as conflicting the interests of individual workers and the growth and concentration of the collective strength of unions."

What the Factory Worker Really Thinks About the Taft-Hartley Law and Labor in Politics. (In Factory Management and Maintenance, New York, October 1948, pp. 66-71, charts. 35 cents.)

First of three articles giving results of Factory's fifth annual survey of worker opinion, made in 34 States "containing 97 percent of all factory workers." One of the conclusions of the inquiry concerning the attitude of workers toward the Taft-Hartley law was that the proportion opposed to the law is smaller than it was a year ago.

Labor Organizations

Trade-Union Developments in Postwar Austria. By Oscar Weigert and Theodore Lit. Washington, U. S. Bureau of Labor Statistics, 1948. 5 pp. (Serial No. R. 1938; reprinted from Monthly Labor Review, September 1948.) Free.

British Trade Unionism—Six Studies by P E P. London, P E P (Political and Economic Planning), 1948. 184 pp. 15s; \$4.75, New Republic, 40 E. 49th St., New York.

These studies as published represent something less than the comprehensive report on all phases of the British trade-union movement which was planned and begun towards the end of the war, but was suspended in 1946. As they stand, they do, however, shed a great deal of light on the nature of trade-unions in Britain at the beginning

of the postwar period, when their functions were beginning to undergo many changes, owing chiefly to the advent of full employment and the Labor Government. The studies deal with trade-union structure; the machinery of collective bargaining (including statutory machinery for certain industries); subjects covered by agreement (wages, hours, and other issues); the Trades Union Congress and its relation to government, to employers, and to international organizations; representation at the factory level; and a final summary study called "Trade Union in Post-War Britain." The authors are not identified. Among the volume's more interesting contributions are the analyses of the extent of membership participation in union meetings and polls, and of the relationship existing between union officials at local and national levels, which occur in the first study.

Labor Organization in Britain's Colonies. (In Labor and Industry in Britain, British Information Service, New York, Washington, etc., September 1948, pp. 140-144. Free.)

Describes policy and machinery within the British Colonial Office for promoting development of trade-union and providing needed labor legislation (including fair-wage clauses) in colonial territories; assistance furnished colonial trade-unions by the British Trades Union Congress; and growth of trade-unions, labor departments, and factory legislation in the colonies.

La Conquista della Libertà Sindacale. By Giuliano Mazzoni. Rome, Università di Firenze, Instituto di Diritto del Lavoro, 1947. 329 pp.

Traces the evolution of labor organization from the Roman period to the present, and presents a catalogue of labor legislation in various countries, and texts of basic trade-union laws of Great Britain, the United States, France, Russia, and Italy.

Minority Groups

Employing "Minorities" Successfully. Philadelphia, American Friends Service Committee, 1948. 5 pp. (Rev. ed.)

Executive Orders on Discrimination. By Joseph D. Lohman. (In American Council on Race Relations Report, Chicago, August 1948, pp. 1-4.)

Executive Orders Nos. 9980 and 9981, prohibiting racial discrimination in Government departments and in the armed forces, are reviewed by the executive secretary of the National Committee on Segregation in the Nation's Capital.

Law Administration and Negro-White Relations in Philadelphia—A Study in Race Relations. By G. Gordon Brown. Philadelphia, Bureau of Municipal Research, 1947. 183 pp., bibliography.

One of the eight chapters covers Negro population and housing, and another, Negro employment and social status in Philadelphia.

Old-Age Problems

Birthdays Don't Count. Albany, New York State Joint Legislative Committee on Problems of the Aging.

1948. 326 pp., charts, illus. (Legislative Doc., 1948, No. 61.) Free.

This volume brings together the findings of experts on many different aspects of the problem of the aged. They were assembled by the committee as a guide in determining what New York State could do to ease the burdens of elderly people.

The Employment of Older Persons. By Geoffrey Thomas. London, Medical Research Council, Industrial Health Research Board, 1947. 73 pp.; processed. Report on an inquiry conducted in 1945 among men and women aged 60 and over, covering present occupation, occupational history, hours of work, and methods of pay.

Employment Problems of Older Workers. By J. W. Willard. (In Public Affairs, Halifax, Nova Scotia, July 1948, pp. 135-140. 30 cents.)

Summary of address at National Conference of Social Work, Atlantic City, April 1948.

The Noncash Needs of Aged Persons Affecting Their Individual and Social Security—An Annotated Bibliography. By Florence A. Armstrong. Washington, Federal Security Agency, Social Security Administration, Bureau of Research and Statistics, August 1947. 199 pp.; processed.

Social Security for the Aged. By L. B. Wheildon. Washington (1205 19th Street NW.), Editorial Research Reports, 1948. 16 pp. (Vol. II, 1948, No. 6.) \$1.

The writer discusses the situation of the aged under price fixation, and reviews provisions made for them under the Social Security Act and proposals for revision.

Social Adjustment in Old Age—A Research Planning Report. By Otto Pollak. New York, Social Science Research Council, 1948. 199 pp., bibliography. (Bull. No. 59.) \$1.75.

Presents basic concepts, suggestions, and techniques for planning future studies on various problems (socio-economic and individual) connected with the aging of our population. Among other phases, major questions connected with the older worker and with his retirement are discussed.

Social Security (General)

Social Security in Industry: Extent and Cost of Voluntary Services in Selected Industries. Chicago, Research Council for Economic Security, 1948. 11 pp., charts. (Publication No. 46.)

Social Security Legislation, January-June 1948: Legislative History and Background. By Wilbur J. Cohen and James L. Calhoun. (In Social Security Bulletin, Federal Security Agency, Social Security Administration, Washington, July 1948, pp. 3-14. 20 cents, Superintendent of Documents, Washington.)

Payroll Flexibility Through Employee Trusts. By Gustave Simons. (In Harvard Business Review, Boston, July 1948, pp. 441-453. \$1.50.)

Cites advantages to the employer of a tax-exempt trust and in connection with pension plans and other forms of employee "security," and discusses requirements under Federal law.

General Reports

Handbook of Labor Statistics, 1947 Edition. Washington, U. S. Bureau of Labor Statistics, 1948. 221 pp., loose-leaf. (Bull. No. 916.) 75 cents, Superintendent of Documents, Washington.

Sixth Handbook of Labor Statistics published by the Bureau of Labor Statistics—the first since the 1941 edition (Bull. No. 694). It presents all the principal statistical series of the Bureau, supplemented by selected labor and economic data of other public agencies. Fields covered include employment and pay rolls, labor turn-over, wages and hours, industrial relations, work injuries, prices and cost of living, productivity and unit labor cost, residential and nonresidential construction, housing and rents, consumers' cooperatives, and social security programs.

The figures are for 1947 and earlier years, going back in a few cases to 1890.

The volume was published in loose-leaf form to permit insertion of pages giving new material and bringing up to date the Bureau's regular series (many of which are published currently in the Monthly Labor Review). Availability of inserts will be announced in the Bureau's monthly list of its publications, in the Monthly Labor Review, and in the Monthly Catalog of United States Government Publications issued by the Superintendent of Documents, Government Printing Office.

La France Économique de 1939 à 1946. (In Revue d'Économie Politique, Paris, November-December 1947, pp. 1201-1695.)

Conclusion of a series of reports reviewing various aspects of the French economy between 1939 and 1946. The volume includes comprehensive articles on wage movements, trade-union developments, social legislation, social security, food supply, and housing, under the general heading of social questions.

Political Forces in Present-Day France. By Henry W. Ehrmann. (In Social Research, New York, June 1948, pp. 146-169. \$1.)

Review of postwar political trends in France with special emphasis on repercussions in the trade-union movement.

Bird's Eye View of Postwar Social Developments in the Netherlands. [The Hague, Centraal Bureau voor de Statistiek, 1948?] 7 pp.

Describes briefly methods of regulating wages and other conditions of employment; the social insurance system; re-equipment consumer credits; provisions for disabled workers; and vocational guidance.

The Economy of the USSR During World War II. By Nikolai A. Voznesensky. Washington, Public Affairs Press, 1948. 103 pp.; processed. \$3.

Translation of a study (published in 1947), by the chief of the State Planning Commission of the Soviet Union, dealing with the impact of the war on the Soviet economy and the various economic and other measures taken to maintain production and distribution of essential goods. Sections are included on organization of labor and wages and on trade and prices.

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A: Employment and Pay Rolls

TABLE A-1: Estimated Total Labor Force Classified by Employment Status, Hours Worked, and Sex

Labor force	Estimated number of persons 14 years of age and over ¹ (in thousands)												
	1948												1947
	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.
	Total, both sexes												
Total labor force ²	63,166	63,578	64,511	65,135	64,740	61,660	61,760	61,005	61,004	60,455	60,870	61,510	62,200
Civilian labor force	61,775	62,212	63,186	63,842	63,479	60,422	60,524	59,769	59,778	59,214	59,590	60,216	60,800
Unemployment	1,642	1,899	1,941	2,227	2,184	1,761	2,193	2,440	2,630	2,065	1,643	1,821	1,967
Employment	60,134	60,312	61,245	61,615	61,295	58,660	58,330	57,329	57,139	57,149	57,947	58,595	59,200
Nonagricultural	51,506	51,590	52,801	52,452	51,899	50,800	50,883	50,482	50,368	50,089	50,985	50,609	50,300
Worked 35 hours or more	42,451	30,372	42,305	32,404	43,240	42,726	42,179	42,576	40,977	42,242	43,144	42,516	43,100
Worked 15-34 hours	5,747	17,149	4,811	12,147	4,910	4,886	4,902	4,467	5,258	4,614	4,674	5,147	4,800
Worked 1-14 hours ³	1,726	1,506	1,447	1,394	1,403	1,637	1,776	1,684	1,798	1,513	1,631	1,470	1,380
With a job but not at work ⁴	1,583	2,472	4,239	6,508	2,348	1,550	2,027	1,753	2,338	1,721	1,534	1,376	1,380
Agricultural	8,627	8,723	8,444	9,163	9,396	7,861	7,448	6,847	6,771	7,060	6,962	7,065	7,060
Worked 35 hours or more	6,811	6,705	6,122	7,011	7,390	5,936	5,670	4,754	3,844	4,729	4,500	5,709	6,400
Worked 15-34 hours	1,455	1,636	1,669	1,767	1,669	1,513	1,336	1,397	1,769	1,765	1,631	1,781	1,380
Worked 1-14 hours ³	223	218	249	203	182	201	187	205	386	250	320	298	200
With a job but not at work ⁴	140	165	405	184	154	211	255	431	782	315	421	198	100
Total labor force ²	45,229	45,453	46,525	46,715	46,039	44,519	44,580	44,228	44,236	44,071	44,156	44,426	44,700
Civilian labor force	43,851	44,101	45,215	45,437	44,794	43,208	43,369	43,009	43,026	42,846	42,992	43,148	43,400
Unemployment	1,088	1,251	1,326	1,448	1,375	1,239	1,567	1,765	1,889	1,574	1,239	1,176	1,180
Employment	42,763	42,850	43,889	43,989	43,420	42,058	41,801	41,244	41,127	41,273	41,653	41,972	42,260
Nonagricultural	36,016	35,960	36,836	36,633	36,162	35,356	35,352	35,083	35,046	35,018	35,484	35,323	35,200
Worked 35 hours or more	31,081	23,115	31,226	24,344	31,700	31,006	30,575	30,649	29,592	30,719	31,147	31,020	31,470
Worked 15-34 hours	3,092	10,577	2,599	7,706	2,555	2,565	2,525	2,300	2,800	2,414	2,411	2,709	2,200
Worked 1-14 hours ³	711	646	563	563	597	700	787	729	800	610	738	622	580
With a job but not at work ⁴	1,132	1,622	2,448	3,962	1,332	1,105	1,465	1,294	1,755	1,275	1,187	972	1,020
Agricultural	5,772	5,858	5,663	6,152	6,310	5,525	5,321	4,548	3,608	4,505	4,376	5,236	5,000
Worked 35 hours or more	738	743	882	903	707	862	816	1,035	1,375	1,255	1,177	1,038	1,000
Worked 15-34 hours	124	138	179	145	111	136	124	211	330	202	252	194	180
Worked 1-14 hours ³	114	151	330	157	129	150	189	367	688	292	364	180	100
Total labor force ²	17,937	18,125	17,986	18,420	18,701	17,141	17,171	16,777	16,768	16,384	16,714	17,084	17,460
Civilian labor force	17,924	18,111	17,971	18,405	18,685	17,124	17,185	16,760	16,782	16,368	16,698	17,068	17,440
Unemployment	554	648	618	779	800	522	626	675	750	491	404	445	550
Employment	17,371	17,462	17,356	17,626	17,876	16,602	16,529	16,085	16,602	15,876	16,294	16,623	16,940
Nonagricultural	15,490	15,630	15,965	15,819	15,737	15,414	15,531	15,419	15,322	15,071	15,501	15,286	15,260
Worked 35 hours or more	11,370	7,257	11,079	8,000	11,540	11,720	11,604	11,927	11,385	11,523	11,997	11,596	11,620
Worked 15-34 hours	2,655	6,572	2,212	4,381	2,375	2,321	2,377	2,077	2,455	2,200	2,263	2,438	2,200
Worked 1-14 hours ³	1,015	950	884	831	806	928	989	985	899	903	898	848	780
With a job but not at work ⁴	451	850	1,791	2,546	1,016	445	562	459	583	446	347	404	380
Agricultural	1,880	1,833	1,301	1,807	2,189	1,188	908	666	680	806	793	1,326	1,700
Worked 35 hours or more	1,039	847	459	829	1,080	411	349	206	146	224	473	560	550
Worked 15-34 hours	717	893	787	864	902	651	520	362	384	510	454	743	600
Worked 1-14 hours ³	99	80	70	58	71	65	68	54	56	48	68	104	70
With a job but not at work ⁴	26	14	75	27	25	61	64	44	94	23	57	18	20

¹ Estimates are subject to sampling variation which may be large in cases where the quantities shown are relatively small. Therefore, the smaller estimates should be used with caution. All data exclude persons in institutions. Because of rounding, the individual figures do not necessarily add to group totals.

² Total labor force consists of the civilian labor force and the armed forces.

³ Excludes persons engaged only in incidental unpaid family work (less than 15 hours); these persons are classified as not in the labor force.

⁴ Includes persons who had a job or business, but who did not work during the census week because of illness, bad weather, vacation, labor dispute, or because of temporary lay-off with definite instructions to return to work within 30 days of lay-off. Does not include unpaid family workers.

Source: U. S. Department of Commerce, Bureau of the Census.

NOTE.—Explanatory notes outlining briefly the concepts, methodology, size of the reporting sample, and sources used in preparing data presented in tables A-2 through A-14 are contained in the Bureau's monthly mimeographed release, "Employment and Pay Rolls—Detailed Report," which is available upon request. Fuller discussion is contained in the Handbook of Labor Statistics (Bulletin 916).

TABLE A-2: Estimated Number of Wage and Salary Workers in Nonagricultural Establishments, by Industry Division¹

[In thousands]

1947	Industry division	1948										1947			Annual average	
		Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	1943	1939
Nov.	Oct.	45,872	45,898	45,480	45,098	45,009	44,616	44,209	44,600	44,279	44,603	45,618	44,918	44,758	42,043	30,287
1,621	General estimated employment	16,576	16,704	16,443	16,172	16,115	15,892	15,950	16,260	16,183	16,267	16,354	16,256	16,209	17,381	10,078
1,621	Manufacturing	941	948	952	922	950	935	817	924	914	922	925	923	922	917	845
1,621	Mining	82	82	83	81	82	81	82	82	81	81	81	81	81	83	89
1,621	Anthracite	422	426	426	396	426	423	309	419	415	422	421	417	415	437	388
1,621	Bituminous coal	103	100	99	103	104	102	103	102	101	100	100	100	99	126	103
1,621	Metal	96	98	98	97	97	96	93	90	87	89	94	96	97	90	76
1,621	Quarrying and nonmetallic	238	242	246	246	241	234	230	231	230	230	229	229	230	181	180
1,621	Crude petroleum and natural gas production ¹	2,197	2,240	2,253	2,219	2,173	2,052	1,933	1,805	1,731	1,871	1,978	2,046	2,009	1,567	1,160
1,621	Contract construction ¹	4,090	4,063	4,139	4,136	4,105	4,042	3,974	4,032	4,019	4,020	4,071	4,077	4,007	3,619	2,912
1,621	Transportation and public utilities	2,835	2,833	2,869	2,873	2,860	2,809	2,744	2,808	2,802	2,809	2,858	2,872	2,809	2,746	2,080
1,621	Transportation	740	741	747	745	734	731	731	728	723	719	719	713	707	488	391
1,621	Communication	515	519	523	518	511	502	499	496	494	492	494	492	491	385	441
1,621	Other public utilities	9,889	9,733	9,660	9,646	9,670	9,617	9,576	9,598	9,520	9,622	10,288	9,886	9,684	7,322	6,705
1,621	Trade	1,723	1,732	1,761	1,754	1,726	1,716	1,704	1,697	1,690	1,680	1,676	1,673	1,671	1,401	1,382
1,621	Finance	4,667	4,647	4,622	4,645	4,663	4,738	4,768	4,729	4,730	4,723	4,688	4,670	4,662	3,786	3,228
1,621	Service	5,789	5,801	5,650	5,604	5,607	5,624	5,577	5,546	5,492	5,498	5,638	5,387	5,414	6,040	3,967
1,621	Government	1,875	1,873	1,865	1,837	1,804	1,788	1,771	1,758	1,746	1,743	1,985	1,761	1,744	2,875	898
1,621	Federal	3,914	3,928	3,795	3,767	3,803	3,836	3,806	3,788	3,746	3,755	3,653	3,636	3,670	3,174	3,089
1,621	State and local															

Estimates are based upon reports submitted by cooperating establishments and therefore differ from employment information obtained by household interviews, such as the Monthly Report on the Labor Force. The Bureau of Labor Statistics estimates of employment in nonagricultural establishments differ from those of the Monthly Report on the Labor Force (table A-1) in several important respects. The Bureau of Labor Statistics estimates cover all full- and part-time wage and salary workers in private nonagricultural establishments who worked or received pay during the pay period ending nearest the 15th of the month, in Federal establishments during the pay period ending just before the first of the month, and in State and local government during the pay period ending on or just before the last of the month. Persons who worked in more than one establishment during the reporting period would be counted more than once. Proprietors, self-employed persons, domestic servants, unpaid family workers, and personnel of

the armed forces are excluded. These estimates have been adjusted to levels indicated by Federal Security Agency data through 1946 and have been carried forward from 1946 bench-mark levels, thereby providing consistent series. Data for the three most recent months are subject to revision.

¹ Includes well drilling and rig building.

² These figures cover all employees of private firms whose major activity is construction. They are not directly comparable with the construction employment estimates presented in table 2, p. 1111, of the June 1947 issue of this publication, which include self-employed persons, working proprietors, and force-account workers and other employees of nonconstruction firms or public bodies who engage in construction work, as well as all employees of construction firms. An article presenting this other construction employment series appeared in the August 1947 issue of this publication, and will appear quarterly thereafter.

TABLE A-3: Estimated Number of Wage and Salary Workers in Manufacturing Industries, by Major Industry Group¹

[In thousands]

Major industry group	1948										1947			Annual average	
	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	1943	1939
Manufacturing	16,576	16,704	16,443	16,172	16,115	15,892	15,950	16,269	16,183	16,267	16,354	16,256	16,209	17,381	10,078
Durable goods	8,306	8,292	8,187	8,165	8,122	8,114	8,164	8,258	8,167	8,256	8,274	8,194	8,126	10,207	4,357
Nondurable goods	8,270	8,412	8,256	8,007	7,993	7,778	7,786	8,011	8,016	8,011	8,080	8,062	8,083	7,084	5,720
Metal and steel and their products	1,955	1,947	1,928	1,897	1,904	1,894	1,897	1,929	1,920	1,925	1,922	1,908	1,896	2,034	1,171
Electrical machinery	731	726	716	714	726	727	742	756	763	767	773	772	763	914	355
Machinery, except electrical	1,570	1,570	1,564	1,571	1,577	1,568	1,562	1,587	1,591	1,583	1,589	1,569	1,565	1,585	690
Transportation equipment, except automobiles	586	574	542	561	562	565	589	589	589	598	591	578	552	2,961	193
Automobiles	967	977	952	984	918	964	979	985	914	989	983	961	964	145	466
Nonferrous metals and their products	473	469	465	457	469	467	475	482	478	478	482	479	472	425	283
Wood and timber basic products	917	930	930	912	881	851	833	827	813	816	829	828	827	889	465
Furniture and finished lumber products	562	558	552	542	550	548	561	576	581	580	578	573	565	429	385
Stone, clay, and glass products	545	541	538	527	535	530	526	527	518	520	527	526	522	422	340
Textile-mill products and other fiber manufacturers	1,372	1,384	1,397	1,364	1,418	1,416	1,425	1,435	1,428	1,413	1,409	1,391	1,368	1,330	1,235
Apparel and other finished textile products	1,351	1,354	1,332	1,235	1,263	1,247	1,268	1,334	1,333	1,311	1,305	1,277	1,287	1,080	894
Leather and leather products	422	424	429	421	419	404	418	442	448	445	446	442	438	378	383
Tobacco manufactures	1,924	2,076	1,957	1,903	1,786	1,610	1,602	1,655	1,658	1,688	1,735	1,769	1,833	1,418	1,192
Paper and allied products	103	101	99	96	98	97	99	100	101	101	102	104	103	103	105
Printing, publishing, and allied industries	490	484	479	476	477	476	476	480	479	482	484	479	476	389	320
Chemicals and allied products	736	725	720	716	719	718	718	722	724	726	732	726	720	549	561
Products of petroleum and coal	789	784	775	751	762	759	767	773	774	778	777	773	773	873	421
Rubber products	238	244	246	247	245	242	238	238	237	238	238	237	237	170	147
Miscellaneous industries	247	247	245	240	243	243	246	253	257	259	261	259	257	231	150
	508	589	577	558	563	566	569	579	578	574	500	500	501	543	311

¹ Estimates include all full- and part-time production and nonproduction workers in manufacturing industries who worked or received pay during the pay period ending nearest the 15th of the month. These estimates have been

adjusted to levels indicated by Federal Security Agency data through 1946 and have been carried forward from 1946 bench-mark levels, thereby providing consistent series. Data for the three most recent months are subject to revision.

TABLE A-4: Estimated Number of Wage and Salary Workers in Manufacturing Industries, by State
[In thousands]

Region and State	1948										1947				Annual average 1948-1943
	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.		
New England:															
Maine ¹	117.9	120.2	116.5	118.2	105.2	106.7	115.2	116.5	116.9	118.5	117.4	116.9	119.6	144	
New Hampshire	82.1	83.6	82.1	82.7	81.6	82.6	84.4	85.6	85.8	85.3	83.9	82.9	82.1	77	
Vermont ¹	37.0	37.8	37.0	37.8	37.8	38.1	38.7	38.8	39.1	40.0	39.5	39.3	39.2	41	
Massachusetts	731.3	725.6	710.0	726.1	723.4	729.7	745.7	746.0	747.3	757.2	753.2	741.6	732.5	855	
Rhode Island	144.7	144.1	144.8	146.5	147.0	149.9	153.6	154.5	153.5	154.6	154.3	152.9	148.1	169	
Connecticut ¹	397.1	392.1	393.3	396.5	401.1	406.4	412.5	412.1	413.2	417.8	415.7	414.8	409.2	504	
Middle Atlantic:															
New York	1,888.5	1,869.6	1,816.5	1,831.7	1,829.0	1,850.4	1,902.6	1,906.4	1,905.8	1,924.6	1,918.6	1,922.8	1,900.1	2,111	
New Jersey	751.4	743.9	732.8	741.8	740.7	746.0	753.7	757.8	757.3	764.0	757.4	751.4	749.2	961	
Pennsylvania	1,508.1	1,498.0	1,481.2	1,495.4	1,489.4	1,497.8	1,514.3	1,513.1	1,515.6	1,527.3	1,523.1	1,517.9	1,504.5	1,879	
East North Central:															
Ohio	1,230.6	1,224.5	1,216.4	1,228.2	1,221.3	1,230.7	1,244.0	1,243.9	1,246.0	1,250.9	1,247.3	1,244.7	1,243.8	1,363	
Indiana	569.6	542.7	544.1	546.4	541.9	540.0	552.8	553.4	556.3	559.0	558.7	561.0	580.0	633	
Illinois	1,243.8	1,231.0	1,227.4	1,228.7	1,203.5	1,198.0	1,253.5	1,267.0	1,271.0	1,273.6	1,266.3	1,257.0	1,249.0	1,263	
Michigan	1,004.9	987.8	996.8	962.7	998.5	1,002.7	1,010.9	970.7	1,019.6	1,024.2	1,019.0	1,021.8	1,023.3	1,181	
Wisconsin ¹	445.9	434.5	447.9	429.7	420.0	426.3	432.5	434.2	433.9	436.1	433.1	433.3	452.0	442	
West North Central:															
Minnesota ¹	210.2	210.0	206.6	203.3	190.9	188.7	198.0	199.0	200.0	202.0	201.3	200.2	210.6	215	
Iowa ¹	153.9	153.0	152.1	149.8	135.1	133.8	153.7	154.7	155.5	156.3	153.9	151.3	152.3	161	
Missouri ¹	347.3	349.1	345.7	343.9	339.3	339.9	346.6	349.2	350.3	351.7	352.7	351.9	348.7	412	
North Dakota	6.8	6.9	7.0	7.1	6.7	6.4	6.3	6.4	6.6	6.7	6.8	6.7	6.7	5	
South Dakota	11.6	11.7	11.8	11.9	11.3	11.3	11.0	11.1	11.2	11.3	11.5	11.4	11.3	10	
Nebraska	42.4	43.1	43.6	43.0	36.1	34.9	42.4	43.0	43.8	46.3	45.9	45.1	43.1	60	
Kansas	84.7	84.5	83.9	84.5	77.0	73.3	77.6	78.3	80.6	81.9	79.9	79.8	79.4	144	
South Atlantic:															
Delaware	48.9	48.2	46.6	46.6	45.8	46.6	46.5	45.9	45.7	46.1	45.8	45.8	48.2	55	
Maryland	242.4	239.2	232.8	229.4	228.5	228.2	228.9	228.5	226.9	229.3	231.1	229.3	232.4	348	
District of Columbia	17.0	16.7	17.2	17.1	17.2	17.4	17.1	16.8	17.3	17.5	17.4	17.5	17.5	15	
Virginia	216.3	214.5	211.5	211.1	210.8	212.8	213.7	213.5	213.6	215.1	217.3	217.0	214.5	231	
West Virginia	132.9	133.7	133.3	133.9	132.4	131.9	130.9	130.3	132.4	132.5	133.0	133.4	132.8	132	
North Carolina	375.4	378.9	362.9	381.7	381.4	382.6	385.8	380.4	382.7	380.8	378.7	374.1	368.1	399	
South Carolina	194.3	196.9	195.8	200.5	199.3	199.3	200.5	196.9	198.3	198.9	197.6	194.8	192.3	191	
Georgia ¹	280.1	280.7	274.3	275.7	273.8	276.4	281.5	280.5	281.7	280.4	283.5	280.3	281.6	302	
Florida ¹	89.9	88.2	88.0	90.0	93.2	96.5	99.4	98.9	100.3	97.8	95.0	90.4	88.6	136	
East South Central:															
Kentucky	128.1	127.4	126.8	127.0	125.9	128.2	129.5	129.4	129.5	130.4	130.7	130.3	128.2	131	
Tennessee ¹	256.2	258.9	255.6	255.7	258.0	257.7	259.0	256.1	254.5	254.7	254.1	252.6	254	258	
Alabama ¹	227.1	228.3	228.9	227.4	227.2	226.5	230.9	230.2	232.7	230.9	230.8	227.9	225.4	255	
Mississippi	87.4	90.6	91.3	89.5	88.1	88.6	90.0	90.5	95.5	95.7	94.1	95.0	95.0	95	
West South Central:															
Arkansas ¹	77.5	77.6	75.6	76.6	75.1	74.8	74.3	74.4	75.3	76.1	76.8	76.7	81.2	76	
Louisiana ¹	155.9	155.9	148.2	149.4	146.0	147.5	145.8	142.5	150.2	151.2	153.1	149.2	149.5	166	
Oklahoma ¹	67.2	66.9	66.7	68.9	65.2	65.5	62.6	62.6	64.0	64.7	64.9	64.3	64.1	79	
Texas	350.1	353.6	352.9	354.8	341.7	338.7	337.1	340.2	342.9	346.6	347.7	339.8	337.9	424	
Mountain:															
Montana	18.1	18.0	18.1	17.7	17.1	17.1	17.2	17.3	17.7	18.5	18.7	19.1	18.1	15	
Idaho ¹	24.8	20.1	20.6	18.8	18.1	16.7	16.9	17.6	18.2	19.5	21.2	22.4	22.6	15	
Wyoming	6.8	6.8	6.8	6.8	6.5	6.3	6.2	6.1	6.1	7.0	7.2	7.1	6.8	5	
Colorado	58.4	56.9	56.5	56.3	53.3	54.0	55.5	55.1	57.2	61.0	60.3	60.6	57.9	67	
New Mexico ¹	10.4	10.5	10.4	10.0	9.3	8.8	8.2	8.2	8.3	8.6	8.6	8.8	9.1	7	
Arizona ¹	14.0	15.2	15.3	*15.5	*15.3	*15.1	14.8	14.6	14.7	14.7	14.6	14.0	13.8	19	
Utah	31.1	27.4	28.7	26.0	24.2	22.6	23.9	23.9	25.1	26.8	27.3	29.4	30.1	33	
Nevada ¹	3.5	3.6	3.4	3.4	3.3	3.3	3.3	3.3	3.3	3.3	3.5	3.5	3.4	7	
Pacific:															
Washington	190.5	183.1	179.9	163.4	182.4	175.3	173.7	173.0	173.0	174.6	178.2	183.9	*186.7	28	
Oregon	121.5	121.2	117.3	112.8	110.7	110.2	110.2	109.2	109.8	111.4	112.2	117.2	122.2	192	
California	799.6	770.9	741.3	713.0	696.3	695.8	700.4	703.5	705.0	715.1	717.7	736.4	744.8	1,168	

¹ Revised data in all except the first three columns are identified by an asterisk for the first month's publication of such data. Comparable series, January 1943 to date, available upon request to U. S. Department of Labor, or cooperating State Agency listed below.

² 1943 averages may not be strictly comparable with current data for those States now based on Standard Industrial Classification.

³ Series based on Standard Industrial Classification.

⁴ Revised.

Cooperating State Agencies:

Alabama—Department of Industrial Relations, Montgomery 5.

Arizona—Unemployment Compensation Division, Employment Security Commission, Phoenix.

Arkansas—Employment Security Division, Department of Labor, Little Rock.

California—Division of Labor Statistics and Research, Department of Industrial Relations, San Francisco 3.

Connecticut—Employment Security Division, Department of Labor and Factory Inspection, Hartford 15.

Delaware—Federal Reserve Bank of Philadelphia, Philadelphia 1, Pa.

Florida—Unemployment Compensation Division, Industrial Commission, Tallahassee.

Georgia—Employment Security Agency, Department of Labor, Atlanta 3.

Idaho—Employment Security Agency, Industrial Accident Board, Boise.

Illinois—Department of Labor, Chicago 1.

Indiana—Employment Security Division, Indianapolis 4.

Iowa—Employment Security Commission, Des Moines 6.

Kansas—State Labor Department, Topeka.

Kentucky—Department of Economic Security, Frankfort.

Louisiana—Division of Employment Security, Department of Labor, Baton Rouge 4.

Maine—Unemployment Compensation Commission, Augusta.

Maryland—Department of Labor and Industry, Baltimore 2.

Massachusetts—Division of Statistics, Department of Labor and Industries, Boston 10.

Michigan—Department of Labor and Industry, Lansing 13.

Minnesota—Division of Employment and Security, Department of Social Security, St. Paul 1.

Missouri—Division of Employment Security, Department of Labor and Industrial Relations, Jefferson City.

Montana—Unemployment Compensation Commission, Helena.

Nebraska—Division of Placement and Unemployment Insurance, Department of Labor, Lincoln 1.

Nevada—Employment Security Department, Carson City.

TABLE A-5: Estimated Number of Production Workers in Manufacturing Industries¹

[In thousands]

Annua l aver age 1943	Industry group and industry	1948										1947			Annual average		
		Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	1943	1939	
119.6	All manufacturing	13,367	13,477	13,245	12,987	12,950	12,738	12,791	13,131	13,066	13,150	13,263	13,176	13,143	14,560	8,192	
82.1	Durable goods	6,813	6,792	6,709	6,681	6,662	6,642	6,683	6,791	6,711	6,795	6,816	6,746	6,681	8,727	3,611	
39.2	Nondurable goods	6,554	6,685	6,536	6,306	6,297	6,096	6,108	6,340	6,355	6,355	6,447	6,430	6,462	5,834	4,581	
148.1	<i>Durable goods</i>																
400.2	Iron and steel and their products	1,657	1,648	1,631	1,601	1,610	1,600	1,603	1,634	1,628	1,634	1,633	1,619	1,600	1,761	901	
144.6	Blast furnaces, steel works, and rolling mills	534.0	534.9	526.5	523.0	517.7	511.8	516.1	508.5	508.8	506.5	505.6	505.1	516.7	388.4		
77.1	Gray-iron and semisteel castings	109.8	106.4	104.7	108.8	107.1	110.7	113.9	114.5	114.4	113.8	113.1	113.1	88.4	62.2		
41.5	Malleable-iron castings	38.5	37.3	36.1	37.9	37.3	37.2	37.9	37.8	37.9	37.6	36.7	36.1	28.8	19.2		
83.4	Steel castings	70.9	69.4	68.2	69.6	68.4	68.6	69.3	68.6	67.7	67.0	66.4	66.2	90.1	32.1		
148.1	Cast-iron pipe and fittings	29.3	29.5	29.0	28.9	28.4	27.6	28.3	28.0	28.7	28.7	28.3	28.1	18.0	17.6		
149.0	Wire cans and other tinware	50.0	49.0	47.3	44.7	42.8	42.1	44.5	45.7	47.4	47.8	47.1	47.0	32.4	31.8		
123.3	Wire drawn from purchased rods	28.6	28.3	28.0	28.7	29.4	29.0	30.6	30.9	31.4	31.6	31.2	31.0	36.0	22.0		
181.1	Wirework	42.7	42.3	41.8	40.2	41.1	41.0	43.4	42.5	43.5	42.4	40.5	40.6	32.8	30.4		
10.6	Cutlery and edge tools	23.8	22.5	21.8	22.1	23.1	23.7	24.0	24.6	24.7	25.0	24.8	24.5	21.8	15.4		
52.3	Tools (except edge tools, machine tools, files, and saws)	24.7	24.5	24.6	25.1	25.2	25.5	25.7	25.8	25.9	25.9	25.4	25.0	27.8	15.3		
161.1	Hardware	50.8	50.1	49.3	49.8	51.9	53.0	54.3	54.1	53.2	52.6	51.1	50.3	45.3	35.7		
5.1	Plumbers' supplies	44.2	40.3	38.8	40.3	39.3	39.4	40.2	40.0	40.0	40.0	39.6	38.7	25.0	26.2		
10.3	Stoves, oil burners, and heating equipment, not elsewhere classified	87.3	84.0	77.6	78.7	79.5	77.8	83.1	86.5	88.5	90.9	91.5	91.1	60.4	49.2		
60.0	Steam and hot-water heating apparatus and steam fittings	61.7	60.4	57.0	60.5	60.8	59.8	62.7	63.2	62.6	62.5	61.8	61.7	64.4	32.3		
55.2	Stamped and enameled ware and galvanizing	108.4	109.0	110.1	111.0	110.9	112.2	114.1	115.1	115.5	117.1	116.4	115.3	97.0	59.2		
15.1	Fabricated structural and ornamental metalwork	61.7	60.9	59.3	59.6	60.0	60.6	60.7	60.2	60.5	60.7	60.5	60.8	71.0	35.5		
39.1	Metal doors, sash, frames, molding, and trim	10.9	10.8	10.4	10.4	10.2	10.1	10.5	10.2	10.8	10.9	10.7	10.5	12.8	7.7		
30.2	Bolts, nuts, washers, and rivets	28.1	27.9	28.1	28.5	28.6	28.9	28.9	28.7	28.7	28.6	28.4	27.8	31.6	15.2		
13.6	Forgings, iron and steel	36.8	35.2	35.1	34.9	35.1	36.7	37.5	37.6	37.8	37.4	36.8	36.7	43.6	16.4		
18.2	Wrought pipe, welded and heavy-riveted	19.7	19.7	19.8	20.1	18.8	18.8	19.2	19.1	19.8	19.6	18.9	18.4	28.4	8.9		
25.6	Screw-machine products and wood screws	34.8	34.8	35.2	35.9	36.4	36.8	36.8	36.6	36.1	35.8	35.5	35.4	53.8	18.0		
5.0	Steel barrels, kegs, and drums	8.0	8.1	7.9	7.9	7.6	7.7	7.9	8.1	8.4	8.2	8.0	8.0	8.5	6.5		
1.2	Firearms	21.6	21.3	21.5	21.4	21.2	21.0	20.8	20.4	20.0	19.7	19.3	19.0	71.7	5.3		
166.5	Electrical machinery ²	553	548	535	547	548	563	577	584	588	596	595	588	741	259		
99.1	Electrical equipment	368.7	363.9	362.3	367.7	368.3	376.0	382.9	387.7	389.7	393.4	391.4	380.0	497.5	182.7		
42.9	Radios and phonographs	89.7	86.9	85.9	89.0	90.0	93.4	97.6	99.2	100.3	104.8	106.3	104.3	124.1	44.0		
15.1	Communication equipment	89.7	87.5	87.0	90.3	90.0	93.9	96.5	97.2	98.2	98.2	97.5	95.6	119.3	32.5		
15.1	Machinery, except electrical ³	1,200	1,208	1,202	1,209	1,217	1,207	1,202	1,232	1,237	1,231	1,235	1,218	1,214	1,293	529	
15.1	Machinery and machine-shop products	509.0	502.2	505.9	511.8	507.9	514.4	518.6	521.3	518.5	517.0	515.1	516.6	586.0	207.6		
15.1	Engines and turbines	50.5	51.5	52.4	52.1	53.5	53.9	54.7	54.4	54.6	54.5	53.0	53.3	79.5	18.7		
15.1	Tractors	50.2	60.0	61.1	60.4	56.3	44.8	62.2	61.9	61.4	60.3	58.6	58.0	52.4	31.3		
15.1	Agricultural machinery, excluding tractors	72.8	72.6	74.9	76.3	75.2	76.2	75.9	74.6	72.3	71.0	68.0	67.5	45.1	28.5		
15.1	Machine tools	48.0	47.8	46.8	47.0	47.5	47.7	49.2	50.4	50.4	51.3	51.1	52.1	109.7	36.6		
15.1	Machine-tool accessories	55.5	55.1	51.8	55.4	55.4	55.5	55.9	56.3	56.4	56.3	55.8	55.6	105.4	25.8		
15.1	Textile machinery	42.1	42.2	41.4	42.0	41.6	41.4	41.1	40.8	40.7	40.6	39.8	39.3	28.5	21.9		
15.1	Pumps and pumping equipment	69.1	67.9	68.5	70.0	71.6	72.2	73.7	75.4	75.5	75.1	74.3	74.2	92.8	24.9		
15.1	Typewriters	21.0	22.1	22.9	23.7	23.8	24.1	24.9	25.1	25.8	25.9	25.2	24.8	12.0	16.2		
15.1	Cash registers; adding, and calculating machines	44.9	44.6	45.2	45.8	45.6	46.3	46.1	45.9	45.3	45.2	44.1	43.0	34.8	19.7		
15.1	Washing machines, wringers, and driers, domestic	15.7	15.6	15.7	16.4	16.0	16.2	16.3	16.5	16.2	16.3	15.8	15.3	13.3	7.5		
15.1	Sewing machines, domestic and industrial	14.6	14.3	14.0	14.0	13.9	13.8	13.7	13.5	13.4	13.3	15.0	12.6	10.7	7.8		
15.1	Refrigerators and refrigeration equipment	81.8	82.3	84.3	84.8	82.5	79.7	81.0	81.6	82.6	81.5	80.1	79.7	54.4	35.2		
15.1	Transportation equipment, except automobiles	440	439	414	430	434	438	462	465	464	472	463	452	427	2,508	159	
15.1	Locomotives	26.8	17.2	26.4	26.3	26.4	26.6	26.6	26.5	26.3	26.3	26.0	25.9	34.1	6.5		
15.1	Cars, electric- and steam-railroad	54.7	54.6	54.5	55.0	53.9	54.4	54.0	55.9	56.9	56.8	55.2	60.5	24.5			
15.1	Aircraft and parts, excluding aircraft engines	138.5	133.5	130.3	127.6	125.1	137.3	136.1	135.3	134.7	133.2	133.4	133.9	794.9	39.7		
15.1	Aircraft engines	26.7	21.6	25.6	25.9	25.1	24.8	24.6	24.9	25.3	25.9	26.2	23.5	8.9			
15.1	Shipbuilding and boatbuilding	97.5	99.5	103.4	108.9	116.1	122.5	125.8	127.7	132.9	125.7	117.6	100.2	1,225.2	69.2		
15.1	Motorcycles, bicycles, and parts	13.3	11.6	10.8	12.4	12.9	14.4	14.8	14.6	14.5	14.7	14.4	14.1	10.0	7.0		
15.1	Automobiles	773	777	763	787	739	767	772	784	720	789	785	766	764	714	402	
15.1	Nonferrous metals and their products ⁴	403	399	395	388	399	398	406	413	409	409	413	410	404	449	229	
15.1	Smelting and refining, primary, of nonferrous metals	40.2	41.4	41.9	42.0	41.4	41.0	40.8	40.2	39.9	40.0	39.7	39.7	56.4	27.6		
15.1	Alloying; and rolling and drawing of nonferrous metals, except aluminum	54.3	52.9	51.9	52.6	52.6	53.7	54.6	53.1	53.6	53.4	52.9	53.0	75.8	38.8		
15.1	Clocks and watches	28.6	27.5	25.9	28.3	28.3	28.5	28.8	28.6	28.6	28.6	28.4	28.1	25.2	20.3		
15.1	Jewelry (precious metals) and jewelers' findings	27.1	26.3	25.8	26.3	26.4	27.1	27.6	27.5</								

TABLE A-5: Estimated Number of Production Workers in Manufacturing Industries¹—Continued
[In thousands]

Industry group and industry	1948											1947			Annual average	
	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	1943	1939	
Durable goods—Continued																
Nonferrous metals and their products ² —Con.																
Lighting equipment	32.2	31.6	30.2	30.9	30.4	31.3	33.1	33.9	33.6	34.1	34.3	34.9	28.2	20.1		
Aluminum manufacturers	38.5	39.5	39.3	42.3	42.7	44.2	45.2	45.2	45.3	44.8	43.6	43.1	79.4	23.2		
Sheet-metal work, not elsewhere classified	37.0	37.3	36.8	36.4	36.7	37.5	38.3	38.4	38.8	40.9	40.6	40.1	37.9	18.7		
Lumber and timber basic products ³	831	843	844	820	799	772	754	749	736	738	750	751	751	535	420	
Sawmills and logging camps	691.4	692.1	681.1	654.5	627.7	611.0	606.9	594.1	597.7	610.7	612.8	616.3	435.8	313.7		
Planing and plywood mills	151.9	152.5	148.3	145.8	144.0	142.7	142.3	141.1	140.8	139.4	137.7	134.5	90.2	79.1		
Furniture and finished lumber products ³	470	466	461	452	450	458	470	485	490	489	487	483	475	366	328	
Mattresses and bedsprings	36.8	35.2	33.2	33.4	33.3	34.9	37.0	38.6	38.7	38.4	38.2	37.2	21.7	20.3		
Furniture	282.5	249.7	244.4	248.1	249.6	256.2	263.7	266.2	265.1	262.9	259.3	253.8	200.0	177.9		
Wooden boxes, other than cigar	34.7	35.0	35.6	35.6	34.8	36.0	37.0	37.6	37.8	37.0	37.6	38.3	35.4	28.2		
Caskets and other morticians' goods	19.4	19.3	18.9	19.4	19.9	20.3	20.9	20.7	21.0	21.1	20.9	20.7	14.2	13.9		
Wood preserving	17.3	17.6	17.2	16.8	16.5	16.2	16.7	17.6	18.0	18.6	19.0	19.4	12.4	12.6		
Wood, turned and shaped	34.2	34.0	33.6	35.4	34.3	35.0	35.7	35.1	34.3	34.9	34.5	33.6	26.4	24.0		
Stone, clay, and glass products	468	464	461	450	458	454	451	452	443	445	454	452	449	360	294	
Glass and glassware	118.6	115.6	111.0	116.5	117.5	117.9	117.8	115.1	117.2	119.7	120.1	120.0	99.8	71.4		
Glass products made from purchased glass	12.1	12.0	12.4	12.3	12.2	12.4	12.5	12.4	12.5	12.7	12.6	12.2	11.3	10.9		
Cement	37.2	38.0	38.1	37.6	37.1	36.6	36.4	36.6	36.8	36.7	36.8	36.8	27.1	24.4		
Brick, tile, and terra cotta	81.5	81.3	79.8	80.1	77.7	76.1	75.5	73.7	76.3	76.3	75.8	75.6	52.5	58.0		
Pottery and related products	58.8	58.4	55.6	57.6	57.1	56.6	57.6	56.5	56.1	57.6	57.2	56.1	45.0	33.8		
Gypsum	6.7	6.7	6.7	6.6	6.5	6.6	6.6	6.6	6.6	6.6	6.5	6.4	4.5	4.0		
Wallboard, plaster (except gypsum), and mineral wool	12.7	12.7	12.7	12.6	12.6	12.4	12.5	12.6	12.7	12.7	12.3	11.1	8.1			
Lime	9.3	9.4	9.4	9.3	9.5	9.6	9.5	9.3	9.3	9.5	9.1	9.3	9.0			
Marble, granite, slate, and other products	18.8	18.8	18.7	18.5	18.1	17.9	18.4	17.9	18.0	18.3	18.5	18.4	12.5	18.5		
Abrasives	17.7	17.9	18.3	17.8	17.5	17.5	17.5	17.1	18.3	18.6	16.5	16.5	16.5	23.4	7.7	
Asbestos products	22.0	21.7	20.9	21.7	21.8	21.9	22.0	21.8	21.9	21.7	21.3	21.3	22.0	15.9		
Nondurable goods																
Textile-mill products and other fiber manufacturers ⁴	1,249	1,261	1,274	1,243	1,295	1,293	1,301	1,312	1,306	1,292	1,290	1,271	1,249	1,237	1,144	
Cotton manufactures, except small-wares	516.9	521.5	509.9	527.7	524.7	526.4	520.4	525.3	523.6	523.2	516.9	508.2	526.3	418.4		
Cotton smallwares	13.4	13.5	13.4	14.0	14.0	14.4	14.6	14.9	14.6	14.6	14.3	13.7	13.7	17.8	14.1	
Silk and rayon goods	122.1	121.5	116.5	121.2	120.3	120.1	120.0	119.2	115.5	116.2	114.8	113.4	104.1	126.6		
Woolen and worsted manufactures, except dyeing and finishing	165.8	169.8	167.5	173.8	173.2	175.0	178.3	179.5	177.4	177.3	174.2	170.9	174.1	157.7		
Hosiery	141.8	143.7	135.3	145.6	147.0	149.7	151.9	150.8	149.5	148.7	146.3	143.1	125.9	168.0		
Knitted cloth	11.0	11.2	11.1	11.2	11.5	11.8	11.7	11.7	11.6	11.5	11.5	11.2	12.6	11.5		
Knitted outerwear and knitted gloves	31.7	31.7	30.3	33.1	33.8	33.4	34.0	33.9	32.9	32.7	33.7	33.0	34.8	29.7		
Knitted underwear	49.1	50.1	50.2	51.8	52.3	53.8	54.1	53.5	52.8	52.5	51.4	50.4	44.9	40.7		
Dyeing and finishing textiles, including woolen and worsted	91.1	91.7	91.0	93.1	94.2	95.0	95.1	95.5	94.4	94.0	92.2	91.4	80.2	70.6		
Carpets and rugs, wool	40.7	40.0	40.0	40.0	39.7	39.4	39.4	39.0	38.4	38.0	36.9	36.1	24.5	27.0		
Hats, fur-felt	12.6	13.3	12.3	13.4	12.9	12.7	13.7	13.7	13.7	13.8	13.6	13.6	11.0	15.4		
Jute goods, except felts	4.0	4.3	4.3	4.3	4.2	4.3	4.1	4.2	4.0	3.1	3.0	3.0	4.2	3.8		
Cordage and twine	15.3	15.4	15.8	16.2	16.4	16.7	17.1	17.2	16.8	16.5	16.1	15.4	18.3	12.8		
Apparel and other finished textile products	1,175	1,173	1,157	1,070	1,095	1,082	1,103	1,165	1,166	1,147	1,143	1,117	1,127	958	700	
Men's clothing, not elsewhere classified	319.3	318.2	296.5	314.4	309.8	310.0	314.5	311.3	308.1	310.5	300.2	306.9	265.9	229.6		
Shirts, collars, and nightwear	79.5	78.6	75.8	80.0	80.9	82.0	82.2	82.0	81.6	82.4	81.1	79.3	67.2	74.0		
Underwear and neckwear, men's	18.1	17.8	16.7	18.2	18.4	18.7	19.0	18.7	18.1	18.4	18.1	17.3	16.3	17.0		
Work shirts	18.0	18.6	18.5	18.6	18.2	17.9	17.5	16.8	15.8	15.5	15.5	15.8	18.5	14.1		
Women's clothing, not elsewhere classified	492.3	480.7	437.0	435.4	427.6	440.0	481.7	485.3	476.2	470.5	452.1	462.3	345.3	290.2		
Corsets and allied garments	19.0	18.5	17.3	18.1	18.5	19.2	19.9	20.1	19.7	19.6	19.4	18.8	16.5	18.8		
Millinery	25.0	25.1	22.2	20.0	20.5	23.6	27.6	27.9	26.4	23.5	21.6	25.2	23.3	25.5		
Handkerchiefs	4.0	4.8	4.0	4.9	5.0	5.1	5.1	5.0	4.9	5.1	5.2	5.1	5.7	5.1		
Curtains, draperies, and bedspreads	28.4	29.2	25.1	26.4	26.4	27.7	30.6	33.8	32.2	32.1	30.9	25.2	27.5	17.8		
Housefurnishings, other than curtains, etc.	31.1	30.2	28.1	27.0	29.0	30.4	29.2	30.0	30.6	30.0	31.6	24.0	11.2			
Textile bags	29.2	28.9	28.1	27.1	26.8	27.3	27.8	28.2	28.6	28.4	28.1	19.6	12.6			
Leather and leather products ⁵	376	379	383	375	373	359	372	396	402	390	400	396	303	340	347	
Leather	48.0	47.7	47.2	47.9	47.5	47.6	49.2	50.3	50.2	50.3	50.2	50.2	46.5	50.0		
Boot and shoe cut stock and findings	17.9	18.1	17.7	17.8	17.3	17.7	18.9	19.5	19.7	19.8	19.8	19.6	19.2	20.0		
Boots and shoes	241.0	244.8	239.5	236.6	225.5	235.9	234.1	257.8	256.2	255.4	251.1	248.8	205.6	230.9		
Leather gloves and mittens	13.0	13.2	12.8	12.9	12.4	12.2	12.5	12.5	12.2	13.0	13.2	13.1	15.4	10.0		
Trunks and suitcases	14.3	13.8	13.3	13.3	13.2	13.3	13.9	14.0	13.3	14.2	14.8	14.4	13.7	8.3		
Food ⁶	1,400	1,537	1,418	1,364	1,257	1,091	1,047	1,149	1,159	1,191	1,255	1,288	1,353	1,056	855	
Slaughtering and meat packing	195.2	196.8	201.3	199.6	124.5	104.0	193.6	199.0	209.7</td							

TABLE A-5: Estimated Number of Production Workers in Manufacturing Industries¹—Continued

[In thousands]

Annual average	Industry group and industry	1948										1947			Annual average	
		Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	1943	1939
Nondurable goods—Continued																
Food ² —Continued																
Cereal preparations		13.2	13.8	13.9	13.0	12.8	12.2	12.1	12.4	12.1	12.1	12.8	12.8	11.4	8.4	
Baking		253.2	251.0	250.0	247.8	242.2	239.5	241.7	238.7	236.4	242.2	246.1	245.4	211.3	190.4	
Sugar refining, cane		24.9	25.3	25.8	22.1	21.4	20.8	23.5	24.2	22.2	24.0	24.8	24.3	16.7	15.9	
Sugar, beet		10.3	8.9	7.5	7.3	6.6	5.7	5.9	6.8	11.1	21.7	27.4	27.6	10.1	11.6	
Confectionery		80.2	70.4	61.8	63.7	62.1	67.1	72.5	77.3	82.0	86.2	87.0	83.5	59.5	55.7	
Beverages, nonalcoholic		46.7	49.6	50.3	46.2	43.4	40.5	38.4	36.1	37.4	37.3	38.2	39.7	32.2	23.8	
Malt liquors		86.5	87.8	88.2	83.1	73.6	77.3	74.8	74.1	75.2	77.0	80.6	81.8	54.3	40.5	
Canning and preserving		443.9	326.2	274.3	186.9	153.2	140.7	135.5	136.8	142.2	165.7	190.1	265.2	188.5	150.3	
Tobacco manufactures ³	90	88	86	83	85	84	86	87	88	87	88	90	89	91	93	
Cigarettes		34.9	34.5	33.6	33.3	33.1	33.2	33.2	33.5	33.6	34.2	34.0	33.4	33.9	27.4	
Cigars		44.9	44.1	41.7	43.6	43.7	45.2	46.2	46.2	45.8	45.6	47.8	47.0	47.5	55.8	
Tobacco (chewing and smoking) and snuff		7.8	7.8	7.6	7.7	7.6	7.7	7.8	7.9	7.9	8.3	8.2	8.2	9.3	10.1	
Paper and allied products ³	401	398	394	388	390	389	389	393	392	395	398	394	392	324	265	
Paper and pulp		206.7	206.7	205.8	204.2	204.7	203.7	203.8	203.0	203.0	202.8	200.7	200.2	160.3	137.8	
Paper goods, other		59.5	58.7	60.5	61.7	61.5	61.4	62.0	61.9	62.6	63.8	63.3	63.0	50.2	37.7	
Envelopes		12.7	12.4	12.3	12.5	12.7	12.7	12.7	12.5	12.4	12.4	12.4	12.2	10.2	8.7	
Paper bags		17.9	17.7	17.4	17.5	17.6	18.0	18.2	18.0	18.1	18.2	17.9	17.9	13.1	11.1	
Paper boxes		97.0	94.8	90.9	92.8	91.4	92.7	95.3	96.5	97.7	99.6	99.0	98.1	89.6	69.8	
Printing, publishing, and allied industries ³	442	436	432	430	433	432	432	435	438	439	445	444	441	331	328	
Newspapers and periodicals		149.4	147.7	146.8	146.9	146.4	145.0	144.8	144.1	143.6	145.6	145.1	144.6	113.0	118.7	
Printing; book and job		185.4	183.1	183.0	184.4	183.2	185.4	187.7	189.7	191.4	190.6	189.3	188.7	127.6	127.6	
Lithographing		31.1	31.2	31.2	31.1	30.9	31.3	31.4	31.8	32.0	32.9	33.0	32.6	25.9	26.3	
Bookbinding		34.4	34.8	33.3	35.1	35.1	35.9	37.2	37.4	37.6	38.3	38.7	38.5	29.4	25.8	
Chemicals and allied products ³	600	597	586	567	574	572	580	587	588	588	592	589	586	734	288	
Paints, varnishes, and colors		49.1	49.7	49.1	49.1	48.7	48.0	48.6	49.3	48.6	48.4	48.0	47.6	38.2	28.3	
Drugs, medicines, and insecticides		64.2	63.9	63.4	63.6	63.6	64.2	65.2	65.6	65.7	65.9	66.4	67.1	56.0	27.5	
Perfumes and cosmetics		12.3	12.3	10.8	10.9	11.0	11.2	11.6	12.1	12.0	12.9	13.9	13.5	14.1	10.4	
Soap		27.1	25.2	24.0	23.7	21.7	21.8	24.9	25.4	25.5	25.5	25.8	26.3	17.9	15.3	
Rayon and allied products		63.7	64.9	64.4	64.3	63.4	63.5	63.7	63.2	63.5	63.1	62.9	54.0	48.3		
Chemicals, not elsewhere classified		210.9	211.2	202.0	207.6	204.8	207.2	205.4	205.5	206.7	207.0	205.5	204.3	144.5	69.0	
Explosives and safety fuses		27.6	27.8	27.4	26.7	25.7	25.6	25.8	25.5	25.3	25.3	24.8	24.1	112.0	7.3	
Compressed and liquefied gases		9.8	10.1	10.0	10.1	10.0	10.0	9.9	9.8	9.9	9.7	9.7	7.8	4.0		
Ammunition, small-arms		7.5	7.5	7.7	7.8	7.8	7.8	7.8	7.8	7.7	7.4	7.2	7.2	154.1	4.3	
Fireworks		2.9	2.8	2.2	2.5	2.6	2.4	2.4	2.6	2.5	2.8	2.9	2.9	28.2	1.2	
Cottonseed oil		23.4	14.3	12.5	12.7	13.6	15.2	17.6	19.5	21.7	24.4	24.5	24.0	20.4	15.3	
Fertilizers		28.9	26.9	25.5	27.2	32.3	36.7	38.1	35.4	33.3	30.7	29.2	29.3	27.5	18.8	
Products of petroleum and coal ³	163	168	170	170	170	167	164	165	163	164	165	165	165	125	106	
Petroleum refining		114.0	115.9	117.0	116.6	114.7	113.6	113.5	112.1	112.4	112.5	112.3	112.4	83.1	73.2	
Coke and byproducts		32.4	32.4	31.8	31.7	31.1	29.7	30.7	30.3	30.5	30.0	30.0	29.6	25.5	21.7	
Paving materials		3.0	2.8	2.7	2.6	2.4	2.3	1.8	1.8	2.0	2.7	3.4	3.4	2.1	2.5	
Roofing materials		18.0	17.8	17.4	17.7	17.3	17.4	17.4	17.6	18.0	18.3	18.5	18.4	13.1	8.1	
Rubber products ³	198	197	195	191	195	198	204	208	210	212	210	208	194	121		
Rubber tires and inner tubes		91.4	91.5	90.9	91.9	91.4	92.6	96.4	98.9	100.6	101.9	102.4	102.0	90.1	54.2	
Rubber boots and shoes		22.5	22.0	20.7	21.8	21.7	22.1	22.6	22.8	22.5	22.5	22.0	21.7	23.8	14.8	
Rubber goods, other		83.0	80.8	79.2	81.7	81.7	84.0	85.7	86.5	86.8	87.7	86.1	84.0	79.9	51.9	
Miscellaneous industries ³	460	451	441	425	430	432	436	447	445	443	459	466	450	445	244	
Instruments (professional and scientific), and fire-control equipment		29.1	28.1	28.0	27.7	27.5	27.6	27.7	27.7	27.7	28.1	27.8	28.0	86.7	11.3	
Photographic apparatus		39.7	39.7	39.0	38.3	37.8	38.4	38.8	39.0	38.9	39.2	38.8	38.7	35.5	17.7	
Optical instruments and ophthalmic goods		24.8	24.8	23.9	25.6	26.7	27.0	27.2	27.4	27.8	28.0	27.6	27.5	33.3	11.9	
Pianos, organs, and parts		13.5	13.3	12.3	13.5	13.7	13.3	14.8	15.7	16.8	17.6	17.8	17.4	12.2	7.8	
Games, toys, and dolls		48.6	45.3	42.4	41.1	40.2	40.3	38.5	36.3	33.5	38.5	43.4	42.3	19.1	19.1	
Buttons		13.0	13.0	12.5	12.9	12.8	13.1	13.8	13.4	13.3	13.4	12.7	12.1	13.1	11.2	
Fire extinguishers		2.8	2.7	2.8	2.8	2.7	2.7	2.6	2.5	2.6	2.7	2.7	2.8	9.3	1.0	

¹ Data are based upon reports from cooperating establishments covering both full- and part-time production and related workers who worked or received pay during the pay period ending nearest the 15th of the month. Major industry groups have been adjusted to levels indicated by Federal Security Agency data through 1946 and have been carried forward from 1946 bench-mark levels, thereby providing consistent series. Data shown for the three most recent months are subject to revision without notation. Revised figures in any column other than the first three are identified by an asterisk for the first month's publication of such data.

² Estimates for the individual industries comprising the major industry groups have been adjusted to levels indicated by Federal Security Agency data through 1946 and have been carried forward from 1946 bench-mark levels, thereby providing consistent series. Comparable data from January 1946 are available upon request to the Bureau of Labor Statistics. Such requests should specify the series desired.

More recently adjusted data for the individual industries comprising the major industry groups listed below supersede data shown in publications dated prior to:

Major industry group	Mimeographed release	Monthly Labor Review
Electrical machinery	Oct. 1948	Nov. 1948
Nonferrous metals and their products	Oct. 1948	Nov. 1948
Furniture and finished lumber products	Oct. 1948	Nov. 1948
Chemicals and allied products	Oct. 1948	Nov. 1948
Miscellaneous industries	Oct. 1948	Nov. 1948
Machinery, except electrical	Nov. 1948	Dec. 1948
Textile-mill products and other fiber manufacturers	Nov. 1948	Dec. 1948
Food	Nov. 1948	Dec. 1948

TABLE A-6: Indexes of Production-Worker Employment in Manufacturing Industries¹

[1939 average = 100]

Industry group and industry	1948												1947			Ad- eal aver- age
	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	1948	1947	
All manufacturing.....	163.2	164.5	161.7	158.5	158.2	155.5	156.1	160.3	159.5	160.5	161.9	160.8	160.4	177.1	177.1	
Durable goods.....	188.7	188.1	185.8	185.0	184.5	183.9	185.1	188.1	185.8	188.2	188.8	186.8	185.0	201.1	201.1	
Nondurable goods.....	143.1	145.9	142.7	137.7	137.5	133.1	133.3	138.4	138.7	138.7	140.7	140.4	141.1	127.1	127.1	
<i>Durable goods</i>																
Iron and steel and their products.....	167.1	166.2	164.5	161.4	162.4	161.4	161.7	164.8	164.2	164.9	164.7	163.3	162.3	177.1	177.1	
Blast furnaces, steel works, and rolling mills.....	137.5	137.7	135.5	134.6	133.3	131.8	132.9	130.9	131.0	130.4	130.2	130.0	130.0	133.1	133.1	
Gray-iron and semisteel castings.....	176.5	171.0	168.3	174.8	172.2	177.9	183.0	184.0	183.9	183.0	181.8	181.7	181.7	142.1	142.1	
Malleable-iron castings.....	200.4	194.3	188.0	197.0	194.2	193.6	197.0	196.7	197.2	195.5	191.1	187.7	149.7	149.7		
Steel castings.....	221.1	216.4	212.6	217.1	213.6	214.1	216.3	214.2	211.3	208.9	207.3	206.7	206.7	281.1	281.1	
Cast-iron pipe and fittings.....	166.7	167.5	164.5	164.5	161.6	157.0	160.8	159.1	162.9	163.4	160.6	159.5	159.5	102.1	102.1	
Tin cans and other tinware.....	157.4	154.1	148.8	140.8	134.9	132.4	140.0	143.8	149.1	150.3	148.3	148.0	148.0	102.1	102.1	
Wire drawn from purchased rods.....	130.0	128.9	127.5	130.7	134.0	137.1	139.4	140.5	142.7	143.7	141.8	141.0	141.0	163.1	163.1	
Wirework.....	140.5	139.3	137.6	132.4	135.2	137.9	142.9	139.9	143.0	139.4	133.2	133.6	133.6	108.4	108.4	
Cutlery and edge tools.....	154.6	145.8	141.2	143.6	149.9	153.8	155.9	159.4	160.3	162.2	161.0	158.9	158.9	141.1	141.1	
Tools (except edge tools, machine tools, files, and saws).....	161.3	160.3	160.8	163.9	164.7	166.7	167.9	168.8	169.2	169.5	166.1	163.0	163.0	181.1	181.1	
Hardware.....	142.5	140.6	138.3	130.7	146.5	148.6	152.5	151.7	149.4	147.8	143.4	141.1	141.1	127.1	127.1	
Plumbers' supplies.....	156.9	153.7	147.8	153.7	149.8	150.3	153.2	152.6	152.5	152.5	150.9	147.4	147.4	98.3	98.3	
Stoves, oil burners, and heating equipment, not elsewhere classified.....	177.7	170.8	157.9	160.2	161.7	168.2	169.1	175.9	180.0	184.9	186.2	185.2	185.2	122.0	122.0	
Steam and hot-water heating apparatus and steam fittings.....	191.1	187.1	176.4	187.4	188.2	185.2	194.2	195.7	194.0	193.7	191.3	191.2	191.2	199.6	199.6	
Stamped and enameled ware and galvanizing.....	183.2	184.2	186.1	187.6	187.4	199.6	192.8	194.6	195.2	198.0	196.8	194.9	194.9	163.0	163.0	
Fabricated structural and ornamental metal-work.....	173.6	171.6	167.1	167.9	160.0	170.7	170.9	169.4	170.3	171.0	170.2	168.4	168.4	200.0	200.0	
Metal doors, sash, frames, molding, and trim.....	140.4	139.5	134.2	133.7	131.4	130.6	135.4	131.2	130.3	141.0	138.3	135.8	135.8	164.0	164.0	
Bolts, nuts, washers, and rivets.....	184.3	182.8	184.5	187.3	187.8	189.8	190.0	188.2	188.4	187.4	186.5	182.3	182.3	207.4	207.4	
Forgings, iron and steel.....	224.9	215.2	214.5	213.3	214.2	223.9	228.8	229.5	231.0	228.3	225.0	223.8	223.8	266.1	266.1	
Wrought pipe, welded and heavy-riveted.....	220.8	220.7	222.1	225.1	211.0	210.8	215.5	214.6	222.8	219.7	212.5	206.6	206.6	318.8	318.8	
Screw-machine products and wood screws.....	192.8	193.0	195.3	199.1	202.1	204.4	203.9	203.2	200.1	198.7	196.8	196.4	196.4	298.0	298.0	
Steel barrels, kegs, and drums.....	123.9	125.6	122.4	121.7	117.7	119.5	121.9	125.5	130.3	126.4	123.5	123.8	123.8	131.0	131.0	
Firearms.....	405.6	400.3	403.0	402.6	397.9	395.1	390.0	383.9	375.4	369.8	361.6	357.4	357.4	134.6	134.6	
Electrical machinery ¹	213.4	211.5	207.7	206.6	211.1	211.6	217.4	222.9	225.4	227.0	230.2	229.7	226.9	288.0	288.0	
Electrical equipment.....	201.8	199.2	198.3	201.3	201.6	205.8	209.6	212.3	213.3	215.4	214.3	212.4	212.4	272.4	272.4	
Radios and phonographs.....	203.8	197.6	195.3	202.3	204.8	212.2	221.9	225.5	228.0	238.2	241.7	237.0	237.0	282.0	282.0	
Communication equipment.....	276.2	269.5	268.1	278.2	277.3	280.3	297.4	299.3	302.4	302.7	300.3	294.6	294.6	367.0	367.0	
Machinery, except electrical ¹	228.7	227.4	228.8	230.4	228.5	227.4	233.1	234.0	233.0	233.8	230.5	229.7	229.7	244.7	244.7	
Machinery and machine-shop products.....	245.1	241.9	243.7	246.7	246.5	244.6	247.7	249.8	251.1	249.7	248.1	248.8	248.8	292.1	292.1	
Engines and turbines.....	270.8	276.3	281.0	279.5	286.7	286.1	293.3	291.6	292.9	292.4	283.9	285.8	285.8	324.0	324.0	
Tractors.....	189.4	192.0	195.2	193.0	180.1	143.4	198.8	197.9	196.4	192.8	187.5	185.3	185.3	167.0	167.0	
Agricultural machinery, excluding tractors.....	255.2	254.5	262.6	267.4	263.7	267.0	266.1	261.6	253.5	258.8	238.4	236.6	236.6	158.1	158.1	
Machine tools.....	131.2	130.8	127.9	128.4	129.7	130.4	134.5	137.6	137.6	140.2	139.5	142.4	142.4	299.0	299.0	
Machine-tool accessories.....	214.8	213.5	200.7	214.5	214.4	214.8	216.6	218.0	218.6	218.1	216.2	215.3	215.3	408.1	408.1	
Textile machinery.....	192.2	192.5	188.9	191.6	189.8	189.2	187.6	186.2	185.8	185.3	181.9	179.3	179.3	130.1	130.1	
Pumps and pumping equipment.....	278.0	273.1	275.5	281.4	288.0	290.2	296.2	303.1	303.4	302.1	298.9	298.3	298.3	372.0	372.0	
Typewriters.....	129.8	136.5	141.0	145.9	147.0	148.7	153.5	154.9	158.8	159.5	155.5	152.7	152.7	73.0	73.0	
Cash registers; adding and calculating machines.....	228.1	226.7	229.8	232.9	231.8	235.2	234.2	233.4	230.2	229.4	224.1	218.5	217.0	224.0	224.0	
Washing machines, wringers, and dryers, domestic.....	210.3	208.7	209.9	220.0	214.6	217.0	218.4	221.1	216.8	218.1	211.2	205.1	205.1	178.0	178.0	
Sewing machines, domestic and industrial.....	186.6	183.0	179.4	178.6	177.2	175.9	174.8	172.5	171.0	170.1	165.7	160.2	160.2	136.0	136.0	
Refrigerators and refrigeration equipment.....	232.5	236.3	239.5	241.3	234.6	226.7	230.4	232.2	234.9	231.8	227.7	226.6	226.6	154.0	154.0	
Transportation equipment, except automobiles.....	282.9	276.3	260.8	273.7	276.0	290.9	292.7	292.6	297.3	291.6	284.6	269.2	269.2	180.1	180.1	
Locomotives.....	413.5	265.6	407.4	406.5	407.7	410.5	411.3	409.1	406.7	406.2	402.0	400.5	400.5	526.8	526.8	
Cars, electric- and steam-railroad.....	223.2	222.8	222.3	224.4	219.6	219.7	221.8	220.2	228.0	231.8	234.1	225.2	225.2	246.0	246.0	
Aircraft and parts, excluding aircraft engines.....	349.2	336.4	328.5	321.5	315.3	346.0	342.9	341.1	339.5	335.8	336.2	337.4	337.4	203.5	203.5	
Aircraft engines.....	300.1	243.2	287.4	290.8	282.4	278.4	276.9	280.1	284.0	291.0	291.0	294.8	294.8	262.7	262.7	
Shipbuilding and boatbuilding.....	140.8	143.7	149.3	157.2	167.6	176.8	181.8	184.4	191.9	181.5	169.9	144.7	144.7	176.4	176.4	
Motorcycles, bicycles, and parts.....	100.3	105.8	104.4	107.5	105.2	206.0	211.7	209.4	207.6	210.1	207.0	201.8	201.8	143.7	143.7	
Automobiles.....	192.2	193.2	189.7	195.5	183.6	190.5	191.9	195.0	178.9	196.0	195.2	190.4	190.0	177.0	177.0	
Nonferrous metals and their products ¹	176.0	173.9	172.4	169.2	173.9	173.7	176.9	180.0	178.5	178.4						

TABLE A-6: Indexes of Production-Worker Employment in Manufacturing Industries¹—Continued

[1939 average=100]

Oct.	1943	Industry group and industry	1948										1947			Annual average 1943	
			Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.		
Durable goods—Continued																	
160.4	177.	Furniture and finished lumber products ²	143.3	142.0	140.5	137.8	130.8	139.7	143.4	147.8	149.2	149.1	148.3	147.1	144.8	111.7	
185.0	201.	Mattresses and bedsprings	179.5	171.7	161.9	163.0	162.6	170.4	180.3	188.5	188.8	187.3	186.2	181.2	105.9		
141.1	177.	Furniture	141.9	140.3	137.4	139.4	140.3	144.0	148.2	149.6	149.0	147.8	145.7	142.7	112.4		
62.3	177.	Wooden boxes, other than cigar	122.5	123.6	125.6	125.6	122.8	127.2	130.5	132.6	133.6	130.7	132.7	135.2	125.0		
30.0	133.	Caskets and other morticians' goods	139.5	139.0	135.6	139.7	142.8	145.8	150.2	148.9	150.7	151.5	150.6	148.6	102.4		
81.7	142.	Wood preserving	137.3	140.1	137.1	133.6	131.1	128.7	132.7	133.1	130.8	143.6	147.8	151.5	98.7		
87.7	149.	Wood, turned and shaped	139.3	140.9	136.7	144.0	139.5	142.6	145.5	142.7	139.8	142.1	140.6	136.7	107.4		
56.7	281.	Stone, clay, and glass products	150.4	158.2	157.0	153.2	156.0	154.7	153.7	153.9	150.9	151.6	154.7	154.0	152.8	122.5	
59.5	102.	Glass and glassware	166.3	162.1	155.6	163.2	164.7	165.2	165.2	161.3	164.3	167.8	168.4	168.2	139.9		
48.0	102.	Glass products made from purchased glass	120.9	120.1	124.0	123.2	122.2	123.4	124.8	123.8	125.0	127.1	125.8	122.0	113.1		
41.0	163.	Cement	152.7	156.1	156.4	154.5	152.2	150.5	149.4	150.4	149.1	150.5	151.0	151.1	111.5		
33.6	108.	Brick, tile, and terra cotta	140.4	140.1	137.5	138.0	133.8	131.1	130.1	126.9	131.4	131.4	130.6	130.2	90.5		
58.9	141.	Pottery and related products	173.7	172.8	164.4	170.2	168.9	167.2	170.2	166.9	166.0	170.3	169.0	166.0	132.9		
33.0	181.	Gypsum	136.1	136.3	136.6	134.0	132.5	132.8	134.3	133.8	132.7	134.6	132.4	128.7	91.2		
11.1	127.	Wallboard, plaster (except gypsum), and mineral wool	157.1	156.8	156.7	154.9	155.4	155.2	153.1	154.1	155.7	156.9	156.4	151.2	137.2		
7.4	95.	Lime	98.7	99.1	99.4	98.3	100.8	101.6	100.0	98.0	97.8	98.6	99.9	95.8	98.7		
5.2	122.	Marble, granite, slate, and other products	101.5	101.7	101.0	99.6	97.8	96.6	99.3	96.5	97.5	99.0	100.1	99.2	67.4		
1.2	199.	Abrasives	220.3	231.9	236.5	230.4	226.0	226.3	226.4	221.0	178.0	217.6	213.7	213.8	302.2		
4.9	163.	Asbestos products	138.2	136.9	131.6	136.7	137.1	137.5	138.2	137.4	137.8	136.3	134.1	134.4	138.2		
Nondurable goods																	
3.4	200.	Textile-mill products and other fiber manufactures ²	109.2	110.3	111.4	108.7	113.2	113.0	113.7	114.7	114.2	113.0	112.7	111.1	109.2	108.2	
5.8	164.	Cotton manufactures, except smallwares	123.6	124.7	121.9	126.1	125.4	125.8	126.6	125.6	125.2	125.1	123.6	121.5	125.8		
2.3	207.	Cotton smallwares	95.4	96.2	95.3	99.4	102.3	103.6	105.8	105.8	103.8	101.8	98.6	97.2	126.6		
3.8	266.	Silk and rayon goods	96.5	95.9	92.0	95.8	95.0	94.9	94.8	94.1	91.2	91.8	90.7	89.6	82.2		
4.4	298.	Woolen and worsted manufactures, except dyeing and finishing	105.2	107.7	106.3	110.3	109.9	111.0	113.1	113.9	112.5	112.4	110.5	108.4	110.4		
4.8	131.	Hosiery	84.4	85.5	80.5	86.7	87.5	89.1	90.4	89.7	89.0	88.1	87.5	85.2	74.9		
4.4	134.	Knitted cloth	95.6	97.2	96.7	96.8	99.4	101.9	101.4	101.8	100.4	99.9	99.4	97.1	106.4		
0.9	281.	Knitted outerwear and knitted gloves	106.7	106.6	101.8	111.5	113.8	112.3	114.4	114.0	110.6	113.3	113.3	111.1	117.2		
4.4	272.	Knitted underwear	120.6	123.0	123.2	127.1	128.3	132.0	132.8	131.4	129.7	128.9	126.2	123.7	110.4		
0	282.	Dyeing and finishing textiles, including woolen and worsted	129.0	129.8	128.8	131.9	133.3	134.4	134.7	135.3	133.7	133.1	130.5	129.3	113.6		
6	367.	Carpets and rugs, wool	150.6	148.1	148.0	148.1	146.8	145.7	145.7	144.1	142.1	140.6	136.5	133.5	90.8		
7	244.	Hats, fur-felt	82.3	86.6	80.1	87.0	84.2	82.7	89.3	89.0	89.1	89.7	88.5	88.4	71.3		
8	282.	Jute goods, except felts	104.5	114.3	112.6	114.2	112.0	112.8	109.3	110.3	105.1	80.6	79.4	79.5	110.6		
8	220.	Cordage and twine	119.5	120.7	124.0	127.0	128.7	130.9	134.1	134.7	131.6	128.8	125.7	120.4	143.4		
3	167.	Apparel and other finished textile products	148.8	146.5	135.6	138.6	137.1	139.8	147.5	147.7	145.3	144.8	141.5	142.7	121.4		
6	158.	Men's clothing, not elsewhere classified	139.1	138.6	129.1	136.9	134.9	135.0	137.0	135.5	134.2	135.2	134.7	133.6	115.8		
4	294.	Shirts, collars, and nightwear	107.5	106.3	102.5	108.2	109.4	110.9	111.2	110.8	110.4	111.4	109.7	107.2	90.9		
3	408.	Underwear and neckwear, men's	106.6	105.1	98.5	107.4	108.3	110.1	112.0	110.3	106.6	108.8	106.5	102.3	96.3		
3	130.	Work shirts	127.6	131.4	131.3	131.8	129.2	126.4	123.8	119.0	112.0	109.8	109.4	112.1	131.3		
3	372.	Women's clothing, not elsewhere classified	172.0	167.9	152.7	152.1	149.4	153.7	168.3	169.5	166.4	164.4	158.0	161.5	120.6		
7	73.	Corsets and allied garments	101.3	98.8	92.4	96.5	98.8	102.4	106.1	107.0	104.9	104.4	103.3	100.2	88.1		
5	177.	Millinery	98.0	98.3	87.0	78.2	80.4	92.3	108.3	109.2	103.4	92.0	84.7	98.9	91.5		
1	177.	Handkerchiefs	96.2	93.6	77.7	96.6	99.2	99.8	99.6	97.9	96.7	101.1	102.2	100.9	113.1		
1	178.	Curtains, draperies, and bedspreads	159.6	164.4	141.6	148.5	148.8	156.0	172.1	190.5	178.0	181.3	180.9	173.7	141.9		
1	136.	Housefurnishings, other than curtains, etc.	278.1	270.9	251.4	249.9	248.2	250.8	272.0	261.5	268.6	274.3	268.7	283.4	214.9		
1	154.	Textile bags	231.7	229.2	222.9	214.8	212.8	212.4	216.9	220.2	223.7	226.8	225.3	222.6	155.7		
Other and leather products²																	
150.1	108.3	Leather	109.3	110.4	108.1	107.4	103.3	107.1	114.1	115.8	115.3	114.1	113.2	98.1			
126.5	96.0	Boot and shoe cut stock and findings	95.3	94.3	95.7	94.9	95.1	96.4	100.4	100.3	100.4	100.2	100.2	92.9			
246.9	89.8	Boots and shoes	90.7	88.6	88.9	86.9	88.7	94.7	97.8	98.8	99.4	99.0	98.1	96.0			
203.5	104.4	Leather gloves and mittens	106.0	103.7	102.5	97.7	102.2	110.1	111.7	111.0	110.6	108.7	107.8	89.0			
225.7	129.7	Trunks and suitcases	132.1	127.8	128.8	123.9	125.4	124.9	124.9	121.9	130.1	131.8	131.5	153.7			
143.7	163.8	Food ³	179.9	166.0	159.7	147.1	127.7	122.6	134.5	135.6	139.3	146.9	150.7	188.3	123.5		
177.5	144.5	Slaughtering and meat packing	145.7	149.1	147.8	92.2	77.0	143.3	148.0	155.3	160.8	151.0	143.8	128.9			
166.0	181.7	Butter	189.8	196.8	201.2	194.5	183.3	170.5	158.8	162.0	163.6	168.2	172.9	165.2			
104.0	194.3	Condensed and evaporated milk	201.4	207.4	211.2	198.3	188.3	177.2	172.5	169.3	170.6	179.7	188.9	182.6			
166.0	167.9	Ice cream	180.7</td														

TABLE A-6: Indexes of Production-Worker Employment in Manufacturing Industries¹—Continued

[1939 average=100]

Industry group and industry	1948											1947			Ave. num 876 Avg 194	
	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.		
Nondurable goods—Continued																
Paper and allied products ²	151.0	149.8	148.6	146.1	146.9	146.5	146.8	148.0	147.8	148.7	149.9	148.6	147.8	147.8	122	
Paper and pulp	150.0	150.0	149.4	148.2	148.5	147.8	147.9	147.3	147.4	147.4	147.2	145.7	145.3	116	Tools	
Paper goods, other	157.6	155.5	160.2	163.6	163.0	162.6	164.2	164.1	165.9	169.1	167.9	166.9	166.7	166	Hard	
Envelopes	145.8	141.9	140.9	144.0	145.8	145.6	145.7	143.9	142.0	142.0	142.6	142.5	140.6	118	Plum	
Paper bags	160.8	160.2	156.3	157.8	158.5	162.3	164.1	162.0	163.2	163.9	161.3	160.7	160.7	118	Stove	
Paper boxes	139.9	136.7	131.0	133.9	131.8	133.7	137.3	139.1	140.8	143.7	142.7	141.5	120	not		
Printing, publishing, and allied industries ³	134.8	133.0	131.8	131.1	132.3	132.0	131.8	132.8	133.5	134.0	135.7	135.4	134.6	134	Steam	
Newspapers and periodicals	125.9	124.4	123.7	123.8	123.3	122.2	122.0	121.4	121.0	122.7	122.2	121.8	121	100	ster	
Printing; book and job	145.3	143.5	143.4	144.5	144.3	143.5	145.3	147.1	148.6	150.0	149.3	148.3	148	108	Stam	
Lithographing	118.4	118.9	118.9	118.3	117.6	119.0	119.5	121.2	121.7	125.3	125.8	124.2	124	108	Fabri	
Bookbinding	133.7	134.8	129.1	136.3	136.2	139.2	144.5	145.1	145.9	148.8	150.3	149.3	149	114	wor	
Chemicals and allied products ⁴	208.1	207.1	203.3	196.6	199.2	198.4	201.4	203.6	204.2	204.1	205.4	204.5	203.2	204	254	
Paints, varnishes, and colors	173.5	175.7	173.6	173.6	172.1	169.8	171.9	174.5	171.8	171.3	169.9	168.5	168	133	Tools	
Drugs, medicines, and insecticides	233.2	232.1	230.2	231.1	231.1	233.3	236.9	238.3	236.5	239.2	241.3	243.7	243	203	Forge	
Perfumes and cosmetics	118.5	118.1	104.1	105.0	105.2	107.6	111.2	116.2	115.4	123.6	133.1	129.9	129	9	Wrot	
Soap	177.8	165.3	157.6	155.4	142.2	142.9	163.1	166.3	167.0	167.4	168.9	165.7	165	117	Screw	
Rayon and allied products	131.8	134.3	133.2	133.0	131.2	131.4	131.8	131.8	130.8	131.4	130.5	130.1	130	111	Steel	
Chemicals, not elsewhere classified	301.6	302.1	288.9	296.9	292.9	296.3	293.8	293.9	295.6	296.1	294.0	292.2	292	206	Frea	
Explosives and safety fuses	379.2	380.7	376.1	365.7	351.9	350.7	354.1	349.9	347.5	346.7	339.7	331.1	331	158	Electri	
Compressed and liquefied gases	247.0	233.1	232.1	254.2	250.9	252.4	250.1	246.2	249.9	248.8	244.9	243.5	243	197	Electri	
Ammunition, small-arms	174.2	173.9	180.2	181.5	181.6	182.5	182.8	182.2	178.7	172.7	168.7	167.2	167	162	Radi	
Fireworks	249.8	238.0	190.2	212.2	219.7	210.1	203.9	221.8	213.4	243.5	249.0	249.9	249	243	Comp	
Cottonseed oil	153.3	98.8	82.0	83.0	89.1	99.5	115.0	127.7	142.1	159.5	160.5	157.2	157	123	Mach	
Fertilizers	153.6	142.7	135.6	144.4	171.4	104.7	202.3	188.1	176.9	163.1	155.1	155.7	155	146	Texti	
Products of petroleum and coal ⁵	153.6	159.1	160.3	160.7	160.3	157.3	154.9	155.4	153.9	155.0	155.5	156.1	155.8	155	117	Mach
Petroleum refining	155.7	158.3	159.8	159.2	156.7	155.2	155.0	153.1	153.5	163.7	153.4	153.5	153	133	Engin	
Coke and byproducts	149.2	149.3	146.7	145.9	143.2	136.8	141.4	139.6	140.6	138.3	138.2	136.5	136	117	Tract	
Paving materials	120.5	113.5	108.8	107.1	97.1	92.7	75.3	73.2	83.2	109.4	138.1	137.4	137	4	Mach	
Roofing materials	222.7	219.4	215.5	218.2	213.2	214.6	215.3	217.5	222.7	226.2	228.0	227.7	227	161	Texti	
Rubber products ⁶	163.5	162.8	160.9	157.7	161.6	161.1	163.8	168.9	172.0	173.5	175.3	174.0	171.7	171	100	Purp
Rubber tires and inner tubes	168.6	168.7	167.6	169.4	168.5	170.7	177.7	182.4	185.5	187.8	188.7	188.0	188	178	Type	
Rubber boots and shoes	151.2	148.3	139.4	146.9	146.4	149.0	152.4	153.8	151.5	151.4	147.9	146.1	146	130	Cash	
Rubber goods, other	160.1	155.8	152.7	157.5	157.5	161.9	165.3	166.9	167.4	169.1	166.0	162.0	162	154	Wash	
Miscellaneous industries ⁷	187.8	184.2	180.1	173.9	175.7	176.6	178.4	182.6	181.9	180.9	187.5	190.4	187.5	181	me	
Instruments (professional and scientific), and fire-control equipment	257.2	248.8	247.4	244.5	242.8	244.1	244.6	245.2	245.8	248.1	246.1	247.4	247	200	Sewin	
Photographic apparatus	224.6	224.5	220.9	216.6	214.1	217.1	219.8	220.9	220.4	221.8	219.5	218.8	218	200	Refr	
Optical instruments and ophthalmic goods	208.7	208.8	201.0	215.6	224.1	226.9	229.1	230.0	233.6	235.4	232.1	231.6	231	200	transpor	
Pianos, organs, and parts	173.6	177.4	164.0	173.7	175.2	170.5	189.7	201.5	215.2	226.3	228.6	222.8	222	154	Loco	
Games, toys, and dolls	254.2	230.4	157.3	214.8	210.3	210.7	201.2	189.9	175.0	201.3	226.9	221.4	221	20	Aircr	
Buttons	116.1	116.9	219.3	114.8	114.2	116.3	122.6	119.4	118.7	119.1	113.0	107.7	107	114	Aircr	
Fire extinguishers	271.3	260.1	271.8	270.6	260.9	266.8	258.6	249.3	253.5	268.0	269.5	273.2	273	212	Ship	

See footnotes 1 and 2, table A-6.

TABLE A-7: Indexes of Production-Worker Weekly Pay Rolls in Manufacturing Industries¹

[1939 average=100]

Industry group and industry	1948											1947			Ave. num 876 Avg 194
	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	
All manufacturing															
Durable goods	381.5	381.7	374.7	360.0	359.0	346.7	347.1	358.4	354.1	358.7	365.7	353.4	350.1	334	311
Nondurable goods	432.9	422.6	418.8	403.0	401.3	390.8	393.4	402.0	393.1	403.1	411.0	395.0	389.9	40	40
Durable goods															
Iron and steel and their products	376.0	365.0	360.5	336.9	340.5	334.4	329.6	340.8	337.6	341.9	345.8	335.1	331.6	311	300
Blast furnaces, steel works, and rolling mills	299.7	295.3	269.9	268.4	265.4	253.0	260.9	257.5	261.2	257.8	255.1	251.9	222	222	200
Gray-iron and semisteel castings	414.8	394.3	377.8	400.1	374.3	394.6	421.7	414.9	416.4	420.7	399.3	406.7	406	378	200
Malleable-iron castings	492.2	478.0	448.8	468.1	460.3	453.0	469.7	467.6	480.1	479.8	459.6	448.7	448	433	278
Steel castings	478.5	473.0	440.5	469.5	454.2	453.2	456.8	442.3	442.1	443.3	429.5	423.1	423	403	278
Cast-iron pipe and fittings	436.2	432.0	414.3	422.0	401.4	370.0	397.5	392.5	394.4	404.0	381.4	382.3	373	373	278
Tin cans and other tinware	390.9	364.3	353.2	310.8	286.1	274.9	289.8	302.4	320.0	336.7	320.7	331.9	331	311	278</

TABLE A-7: Indexes of Production-Worker Weekly Pay Rolls in Manufacturing Industries¹—Con.

[1939 average=100]

Oct.	Industry group and industry	1948										1947			Annual average
		Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	
147.8	Durable goods—Continued														
145.3	Iron and steel and their products—Continued														
166.9	Tools (except edge tools, machine tools, files, and saws)	365.6	372.8	358.7	370.8	366.6	372.4	378.4	379.0	381.0	381.0	363.0	352.6	334.1	
140.6	Hardware	334.0	326.0	303.8	318.6	325.8	342.2	355.1	353.5	352.5	345.9	328.7	321.2	245.8	
160.7	Plumbers' supplies	338.0	338.1	316.7	329.0	324.0	322.2	329.0	320.8	321.8	331.9	324.1	306.8	161.7	
141.5	Stoves, oil burners, and heating equipment, not elsewhere classified	406.6	395.5	352.0	359.9	352.5	345.4	368.6	387.2	395.8	422.7	404.5	417.6	210.0	
134.6	Steam and hot-water heating apparatus and steam fittings	433.9	423.2	397.2	409.5	406.0	393.8	416.5	425.1	403.7	430.9	419.4	403.0	360.6	
121.8	Stamped and enameled ware and galvanizing	430.3	443.9	428.9	439.3	440.6	439.8	447.0	447.4	456.0	472.8	483.7	445.2	307.0	
148.3	Fabricated structural and ornamental metal work	352.7	364.8	329.0	345.2	345.7	340.6	343.4	335.4	339.7	360.1	350.5	347.7	364.3	
124.2	Metal doors, sash, frames, molding, and trim	336.4	324.7	292.9	309.1	288.6	283.9	292.2	276.9	296.7	313.2	298.1	290.0	292.6	
203.2	Bolts, nuts, washers, and rivets	414.7	423.9	401.0	412.8	408.2	416.7	422.4	406.0	393.1	406.0	391.5	386.0	382.0	
168.5	Forgings, iron and steel	504.7	475.0	449.6	454.1	443.7	467.6	487.5	496.2	502.4	506.9	484.8	485.5	507.9	
243.7	Wrought pipe, welded and heavy-riveted	400.0	494.6	473.0	467.3	443.1	437.7	455.3	433.2	457.2	472.7	443.1	427.3	610.9	
129.9	Screw-machine products and wood screws	430.5	427.0	426.8	436.9	445.4	452.0	456.5	452.1	446.1	442.9	421.7	424.3	560.4	
165.7	Steel barrels, kegs, and drums	306.3	337.4	301.4	313.3	302.6	298.1	302.0	300.5	333.7	334.0	308.6	299.6	247.0	
130.1	Firearms	961.2	926.1	952.7	945.9	915.6	906.0	911.3	872.2	846.7	835.0	796.1	780.3	2034.8	
292.2	Electrical machinery *	474.4	466.9	454.8	436.3	440.0	431.6	444.3	459.1	465.1	471.0	481.2	471.9	464.6	488.0
131.1	Electrical equipment	444.4	434.7	418.3	419.2	410.3	420.5	432.2	436.7	443.4	447.1	436.3	429.8	475.6	
145.5	Radios and phonographs	489.4	468.9	456.9	458.6	451.4	468.5	488.4	495.6	507.3	542.9	539.6	533.2	505.0	
249.9	Communication equipment	567.3	550.6	513.4	534.8	530.0	551.2	578.6	593.7	586.4	604.6	597.8	584.5	533.2	
57.2	Machinery, except electrical *	491.7	484.0	482.3	469.5	480.7	466.4	463.8	475.2	471.9	473.8	479.9	480.6	458.0	443.7
55.7	Machinery and machine-shop products	523.2	520.0	507.9	519.6	509.3	511.9	514.7	513.7	513.0	518.9	498.8	497.1	501.8	
55.8	Engines and turbines	586.5	599.2	585.4	601.4	617.6	611.7	632.3	622.1	625.5	607.4	601.9	576.0	849.4	
55.5	Tractors	360.5	369.1	369.2	355.5	285.4	248.9	353.8	351.9	354.3	347.0	336.9	333.1	256.7	
36.5	Agricultural machinery, excluding tractors	577.1	559.3	574.2	595.4	571.2	571.9	576.8	560.5	534.9	522.7	482.5	504.6	298.6	
37.4	Machine tools	248.3	246.8	239.0	242.9	240.7	240.2	249.2	254.4	250.1	262.2	253.3	257.5	503.9	
27.7	Machine-tool accessories	394.0	400.8	361.6	383.5	389.9	392.6	388.9	398.0	397.7	380.2	379.0	671.1		
71.7	Textile machinery	400.7	456.1	438.6	459.1	444.8	441.3	443.2	420.9	417.9	417.4	396.3	381.7	230.1	
88.0	Pumps and pumping equipment	615.0	605.0	605.0	616.5	630.7	630.2	638.0	647.5	642.2	648.3	624.6	627.4	761.8	
46.1	Typewriters	296.8	298.0	319.2	325.2	325.0	336.8	347.5	357.6	366.1	369.6	358.2	342.3	143.8	
32.0	Cash registers; adding, and calculating machines	492.3	489.2	507.0	505.9	489.4	504.7	499.9	490.0	491.9	490.7	463.5	455.8	341.6	
37.5	Washing machines, wringers, and driers, domestic	460.6	469.3	439.2	480.9	454.2	465.3	454.0	470.4	464.3	484.2	449.7	430.5	301.5	
17.4	Sewing machines, domestic and industrial	486.0	460.4	432.3	439.5	428.0	399.9	414.5	404.0	397.9	398.8	382.1	369.9	282.3	
78.8	Refrigerators and refrigeration equipment	491.6	491.4	486.0	508.9	472.3	450.4	454.7	433.7	479.2	465.9	434.3	446.6	264.5	
11.6	Transportation equipment, except automobiles	613.3	581.8	547.7	552.4	561.2	566.4	601.4	600.4	592.3	611.2	600.2	555.1	541.5	3080.3
23.8	Locomotives	957.0	509.4	907.3	913.7	916.4	928.1	908.6	869.2	883.0	900.3	863.1	870.1	1107.3	
12.4	Cars, electric- and steam-railroad	481.3	516.9	467.9	492.5	478.5	483.8	490.3	479.5	500.6	522.4	503.5	493.6	457.9	
17.7	Aircraft and parts, excluding aircraft engines	746.1	698.4	661.1	649.2	634.2	695.2	675.9	667.3	657.4	668.7	653.8	663.8	3496.3	
3.2	Aircraft engines	570.0	453.7	533.1	517.5	493.5	481.0	473.9	469.4	482.9	503.5	479.2	499.9	4528.7	
283.1	Shipbuilding and boatbuilding	283.1	290.6	304.5	321.7	345.7	373.6	383.7	385.4	416.7	378.9	316.6	289.9	3504.7	
7.7	Motorcycles, bicycles, and parts	424.5	374.2	301.8	345.7	370.5	418.2	426.6	420.6	414.5	448.2	441.3	430.8	253.6	
17.4	Automobiles	431.4	417.5	419.1	423.3	385.7	362.6	386.2	396.5	357.6	408.7	427.7	395.6	385.8	321.2
11.6	Nonferrous metals and their products *	394.2	386.3	379.3	360.6	368.2	362.5	368.3	377.1	372.9	372.7	377.8	367.3	359.3	354.5
12.4	Smelting and refining, primary, of nonferrous metals	342.4	345.7	338.6	329.7	321.6	314.1	307.2	303.7	303.1	299.9	300.3	296.0	353.9	
12.4	Alloying; and rolling and drawing of nonferrous metals, except aluminum	307.0	298.5	284.3	278.3	268.9	271.7	288.5	273.2	273.4	271.9	263.7	260.6	353.4	
12.4	Clocks and watches	348.6	334.9	304.5	332.2	327.4	336.8	339.1	333.4	326.2	333.3	330.5	330.1	238.4	
12.4	Jewelry (precious metals) and jewelers' findings	383.8	365.9	345.7	372.5	362.4	377.7	391.8	396.2	383.4	415.6	403.6	393.4	211.8	
12.4	Silverware and plated ware	564.4	528.2	481.8	527.4	522.4	529.4	543.3	525.6	520.5	535.5	507.4	496.2	212.8	
12.4	Lighting equipment	345.6	328.2	317.0	305.9	293.3	308.3	328.4	333.7	337.8	343.0	333.9	333.8	240.4	
12.4	Aluminum manufactures	325.8	332.9	316.8	338.5	347.0	356.8	362.0	366.8	371.3	364.7	351.7	345.5	591.8	
12.4	Sheet-metal work, not elsewhere classified	443.9	464.5	434.1	438.1	430.2	434.8	450.6	447.1	454.4	478.2	454.0	456.3	357.6	
1.1	Lumber and timber basic products *	519.2	523.3	538.8	502.9	488.5	461.1	433.4	427.6	417.2	413.5	431.8	429.1	427.2	215.1
1.1	Sawmills and logging camps	584.4	604.6	563.3	543.3	496.8	471.0	466.4	452.4	450.3	473.4	476.2	476.2	238.3	
1.1	Planing and plywood mills	480.6	485.4	455.3	456.1	445.1	435.4	424.7	422.2	417.1	421.1	400.9	395.0	197.8	
1.1	Furniture and finished lumber products *	354.9	344.5	337.3	320.4	326.0	325.6	333.0	349.2	350.2	352.2	355.7	343.0	338.8	183.9
1.1	Mattresses and bedsprings	411.5	385.5	354.1	347.9	340.2	359.5	387.9	410.9	414.0	420.8	396.6	402.8	165.7	
1.1	Furniture	344.2	334.8	317.5	325.7	328.6	326.3	353.4	356.0	355.4	356.2	344.0	335.2	183.3	
1.1	Wooden boxes, other than cigar	322.0	334.1	318.6	325.7	301.1	304.8	320.5	311.8	324.4	332.4	321.4	328.6	215.8	
1.1	Caskets and other morticians' goods	290.2	287.8	273.4	283.4	289.2	300.3	315.7	310.5	314.4	319.1</				

TABLE A-7: Indexes of Production-Worker Weekly Pay Rolls in Manufacturing Industries¹—Continued

[1939 average=100]

Industry group and industry	1948												1947			Adm. bus. etc. 1948
	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	1947	1946	
<i>Durable goods—Continued</i>																
Stone, clay, and glass products—Continued																
Gypsum	333.7	329.6	306.4	306.1	303.7	208.6	285.4	278.4	283.0	290.2	284.5	278.1	151	151	151	Chemical Paint Drug Perfum Soap Haro Chem Expl Comp Amin Firew Cotto Verti
Wallboard, plaster (except gypsum), and mineral wool	439.4	420.3	426.5	412.9	403.8	406.6	390.1	375.5	374.1	386.5	381.5	366.4	221	221	221	Paint Drug Perfum Soap Haro Chem Expl Comp Amin Firew Cotto Verti
Lime	279.6	281.3	268.9	270.7	273.3	273.3	262.1	243.8	249.5	256.9	259.5	258.9	171	171	171	Paint Drug Perfum Soap Haro Chem Expl Comp Amin Firew Cotto Verti
Marble, granite, slate, and other products	190.6	192.0	184.9	185.9	183.2	176.6	179.3	169.5	173.5	183.3	175.9	183.5	90	90	90	Paint Drug Perfum Soap Haro Chem Expl Comp Amin Firew Cotto Verti
Abrasives	510.0	499.7	495.9	502.4	490.6	474.9	487.0	457.4	363.2	462.1	418.2	408.0	490	490	490	Paint Drug Perfum Soap Haro Chem Expl Comp Amin Firew Cotto Verti
Asbestos products	346.5	343.0	327.5	334.5	329.9	328.9	327.0	322.3	325.0	318.7	313.6	305.6	254	254	254	Paint Drug Perfum Soap Haro Chem Expl Comp Amin Firew Cotto Verti
<i>Nondurable goods</i>																
Textile-mill products and other fiber manufacturers ²	291.2	298.5	298.2	285.4	304.6	303.8	307.1	315.6	310.6	303.0	302.0	288.2	271.8	178	178	178
Cotton manufactures, except smallwares	354.9	357.4	342.0	365.9	369.7	374.7	385.1	377.0	378.7	376.4	362.1	329.1	211	211	211	Chemical Paint Drug Perfum Soap Haro Chem Expl Comp Amin Firew Cotto Verti
Cotton smallwares	228.7	227.3	226.5	238.0	238.3	243.0	249.1	249.3	243.8	234.1	215.1	213.6	214	214	214	Chemical Paint Drug Perfum Soap Haro Chem Expl Comp Amin Firew Cotto Verti
Silk and rayon goods	301.3	295.2	276.9	292.2	289.0	287.6	288.0	282.2	271.5	266.5	254.1	244.2	138	138	138	Chemical Paint Drug Perfum Soap Haro Chem Expl Comp Amin Firew Cotto Verti
Woolen and worsted manufactures, except dyeing and finishing	286.1	297.8	295.5	311.5	307.9	308.6	322.1	321.1	292.0	294.4	276.6	270.4	199	199	199	Chemical Paint Drug Perfum Soap Haro Chem Expl Comp Amin Firew Cotto Verti
Hosiery	202.4	202.8	184.2	199.8	197.6	203.5	212.6	204.8	202.9	207.9	200.2	190.1	169	169	169	Chemical Paint Drug Perfum Soap Haro Chem Expl Comp Amin Firew Cotto Verti
Knitted cloth	220.3	229.6	224.4	223.2	223.1	237.1	243.3	242.6	236.5	231.6	221.7	214.4	174	174	174	Chemical Paint Drug Perfum Soap Haro Chem Expl Comp Amin Firew Cotto Verti
Knitted outerwear and knitted gloves	249.3	244.1	228.2	260.8	266.4	261.2	268.8	269.1	251.9	259.6	261.0	254.3	192	192	192	Chemical Paint Drug Perfum Soap Haro Chem Expl Comp Amin Firew Cotto Verti
Knitted underwear	297.3	313.2	305.2	324.9	326.5	344.5	348.1	334.4	329.6	329.7	317.3	303.5	193	193	193	Chemical Paint Drug Perfum Soap Haro Chem Expl Comp Amin Firew Cotto Verti
Dyeing and finishing textiles, including woolen and worsted	310.7	309.2	299.8	320.6	321.7	328.7	332.1	334.6	326.8	320.3	300.5	291.1	174	174	174	Chemical Paint Drug Perfum Soap Haro Chem Expl Comp Amin Firew Cotto Verti
Carpets and rugs, wool	387.5	381.5	368.4	371.8	358.1	348.8	352.6	346.0	340.5	334.8	319.7	309.8	143	143	143	Chemical Paint Drug Perfum Soap Haro Chem Expl Comp Amin Firew Cotto Verti
Hats, fur-felt	182.8	200.3	174.7	197.4	184.6	174.4	197.5	202.2	195.8	202.1	181.9	185.9	121	121	121	Chemical Paint Drug Perfum Soap Haro Chem Expl Comp Amin Firew Cotto Verti
Jute goods, except felts	248.4	282.2	273.0	277.5	272.2	275.9	264.2	265.7	250.1	175.4	170.1	168.7	79	79	79	Chemical Paint Drug Perfum Soap Haro Chem Expl Comp Amin Firew Cotto Verti
Cordage and twine	283.7	286.4	288.2	306.5	303.4	311.4	330.4	337.6	330.6	320.0	300.6	282.0	240	240	240	Chemical Paint Drug Perfum Soap Haro Chem Expl Comp Amin Firew Cotto Verti
Apparel and other finished textile products	325.0	348.1	342.3	303.6	303.6	297.9	306.5	343.2	345.2	337.0	327.3	304.8	320.5	185	185	185
Men's clothing, not elsewhere classified	324.4	323.5	294.1	312.9	311.5	317.1	324.8	316.4	313.4	309.5	301.5	303.5	174	174	174	Chemical Paint Drug Perfum Soap Haro Chem Expl Comp Amin Firew Cotto Verti
Shirts, collars, and nightwear	263.4	256.2	246.6	258.5	256.8	274.6	279.7	272.0	273.0	281.3	266.0	258.9	143	143	143	Chemical Paint Drug Perfum Soap Haro Chem Expl Comp Amin Firew Cotto Verti
Underwear and neckwear, men's	300.9	293.8	269.6	289.1	296.7	297.0	313.7	300.0	292.9	290.2	292.9	290.2	166	166	166	Chemical Paint Drug Perfum Soap Haro Chem Expl Comp Amin Firew Cotto Verti
Work shirts	337.2	334.8	326.4	333.9	325.8	316.1	305.6	284.6	247.5	248.2	253.1	262.0	220	220	220	Chemical Paint Drug Perfum Soap Haro Chem Expl Comp Amin Firew Cotto Verti
Women's clothing, not elsewhere classified	391.6	381.7	326.6	310.7	299.3	307.1	376.4	387.1	374.8	355.9	319.3	349.5	184	184	184	Chemical Paint Drug Perfum Soap Haro Chem Expl Comp Amin Firew Cotto Verti
Corsets and allied garments	225.7	216.6	201.1	210.8	213.0	229.1	241.6	237.7	234.5	230.5	226.8	219.0	137	137	137	Chemical Paint Drug Perfum Soap Haro Chem Expl Comp Amin Firew Cotto Verti
Military	204.0	199.5	165.3	132.0	127.9	171.3	212.5	236.0	204.4	157.4	123.6	195.2	123	123	123	Chemical Paint Drug Perfum Soap Haro Chem Expl Comp Amin Firew Cotto Verti
Handkerchiefs	254.2	236.2	181.3	231.0	239.1	251.5	259.4	243.4	222.5	251.2	260.4	251.4	194	194	194	Chemical Paint Drug Perfum Soap Haro Chem Expl Comp Amin Firew Cotto Verti
Curtains, draperies, and bedspreads	356.3	392.0	317.6	335.1	334.8	348.5	397.0	431.4	419.1	424.7	422.2	412.1	230	230	230	Chemical Paint Drug Perfum Soap Haro Chem Expl Comp Amin Firew Cotto Verti
Housefurnishings, other than curtains, etc.	632.8	632.3	573.0	587.3	544.2	584.6	609.2	572.9	597.8	653.1	590.1	632.2	370	370	370	Chemical Paint Drug Perfum Soap Haro Chem Expl Comp Amin Firew Cotto Verti
Textile bags	549.5	521.9	498.3	471.1	464.8	446.4	449.3	461.7	481.1	492.9	484.8	472.6	233	233	233	Chemical Paint Drug Perfum Soap Haro Chem Expl Comp Amin Firew Cotto Verti
Leather and leather products ³	236.8	246.9	248.3	236.5	233.4	215.4	227.1	251.7	262.5	258.7	250.6	262.5	251.8	150	150	150
Leather	206.5	207.3	203.6	205.2	201.1	197.9	206.4	216.4	214.8	217.5	213.8	212.9	140	140	140	Chemical Paint Drug Perfum Soap Haro Chem Expl Comp Amin Firew Cotto Verti
Boot and shoe cut stock and findings	185.2	189.5	178.6	179.9	169.6	173.4	187.9	198.6	201.4	202.6	190.3	189.6	141	141	141	Chemical Paint Drug Perfum Soap Haro Chem Expl Comp Amin Firew Cotto Verti
Boots and shoes	241.4	242.9	230.6	225.3	202.8	219.5	249.7	261.0	258.3	256.0	246.7	246.6	142	142	142	Chemical Paint Drug Perfum Soap Haro Chem Expl Comp Amin Firew Cotto Verti
Leather gloves and mittens	272.1	285.4	267.4	273.6	256.9	241.3	252.8	252.2	245.3	262.4	264.1	267.5	239	239	239	Chemical Paint Drug Perfum Soap Haro Chem Expl Comp Amin Firew Cotto Verti
Trunks and suitcases	393.3	376.2	339.5	339.5	339.8	347.2	364.1	366.9	321.6	369.3	406.0	381.8	240	240	240	Chemical Paint Drug Perfum Soap Haro Chem Expl Comp Amin Firew Cotto Verti
Food ⁴	358.2	380.8	351.3	352.2	328.3	381.3	267.4	285.8	288.5	296.6	321.9	323.5	332.8	190	190	190
Slaughtering and meat packing	303.5	296.0	318.8	329.2	226.4	192.5	295.8	280.6	323.0	361.2	337.6	288.4	188	188	188	Chemical Paint Drug Perfum Soap Haro Chem Expl Comp Amin Firew Cotto Verti
Butter	397.8	418.5	432.6	429.8	407.2	381.0	348.2	332.7	330.3	342.2	346.0	353.4	231	231	231	Chemical Paint Drug Perfum Soap Haro Chem Expl Comp Amin Firew Cotto Verti
Condensed and evaporated milk	473.7	492.5	509.9	520.3	477.9	438.1	403.0	388.1	369.8	364.0	377.8	402.5	288	288	288	Chemical Paint Drug Perfum Soap Haro Chem Expl Comp Amin Firew Cotto Verti
Ice cream	333.5	348.4	365.8	341.5	311.3	286.4	261.3	250.9	248.0	258.5	269.9	288.5	170	170	170	Chemical Paint Drug Perfum Soap Haro Chem Expl Comp Amin Firew Cotto Verti
Flour																

TABLE A-7: Indexes of Production-Worker Weekly Pay Rolls in Manufacturing Industries¹—Con.
[1939 average=100]

Oct.	1948	1948										1947			Annual average
		Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	
Industry group and industry															
Chemicals and allied products ²	460.1	462.5	450.6	432.7	434.9	422.5	422.1	425.1	425.6	426.7	424.1	416.4	400.6	422.8	
Paints, varnishes, and colors	341.6	345.1	343.0	335.6	329.9	315.9	319.1	324.4	318.6	315.8	313.1	304.2	297.2		
Drugs, medicines, and insecticides	492.1	485.3	480.6	486.7	481.5	479.9	487.6	489.2	490.7	488.5	489.9	499.1	286.3		
Perfumes and cosmetics	240.4	237.4	204.3	213.7	209.7	215.1	222.0	221.2	230.9	240.5	265.3	250.1	180.6		
Soap	403.7	368.5	344.3	343.1	322.9	321.8	359.0	376.4	379.3	381.3	371.0	357.6	174.5		
Rayon and allied products	297.5	302.7	289.6	280.2	275.1	274.6	271.9	270.2	268.6	265.9	260.5	257.8	168.2		
Chemicals, not elsewhere classified	641.6	629.1	600.4	613.6	589.6	591.1	584.3	584.8	586.8	580.8	566.0	554.9	336.9		
Explosives and safety fuses	796.0	798.3	760.2	737.6	683.8	648.3	675.2	678.2	669.2	651.5	645.6	612.0	236.1		
Compressed and liquefied gases	513.9	512.0	518.2	505.4	491.7	483.7	473.6	475.5	465.0	459.6	458.0	445.6	325.3		
Ammunition, small-arms	411.2	403.1	420.8	411.2	404.1	398.8	396.8	388.7	380.5	411.9	398.0	393.3	6734.4		
Fireworks	630.8	640.1	507.0	572.5	594.9	572.5	625.8	610.2	591.6	623.8	711.6	747.3	5063.9		
Cottonseed oil	459.3	261.7	230.1	228.3	245.9	270.2	316.4	338.0	397.4	448.4	448.7	443.1	230.4		
Fertilizers	441.5	410.1	396.7	414.5	470.4	530.1	540.2	482.2	475.2	430.8	397.2	409.7	272.2		
Nondurable goods—Continued															
Products of petroleum and coal ³	344.1	345.6	358.2	353.4	342.2	335.8	316.7	320.0	315.4	318.1	313.3	300.5	301.8	184.3	
Petroleum refining	326.2	345.5	344.9	330.8	326.2	310.9	306.6	302.1	303.9	300.4	295.9	286.6	176.7		
Coke and byproducts	353.2	350.8	329.5	330.1	320.6	287.3	314.6	312.3	309.8	294.8	292.7	288.1	183.4		
Paving materials	286.1	264.3	248.1	235.0	222.8	206.5	173.1	160.6	168.2	224.8	208.8	205.9	144.8		
Roofing materials	558.3	548.7	531.9	523.3	508.5	495.6	502.7	500.7	508.3	535.7	526.4	523.1	267.3		
Rubber products ⁴	346.3	344.9	347.2	329.7	330.2	318.9	312.8	320.6	337.2	354.9	373.6	361.4	354.4	263.9	
Rubber tires and inner tubes	326.2	341.0	329.8	322.0	305.7	286.4	292.4	315.4	344.4	365.6	362.4	354.7	265.7		
Rubber boots and shoes	355.9	344.1	321.7	329.7	328.1	333.9	347.0	345.0	342.8	367.1	322.4	331.7	268.8		
Rubber goods, other	372.1	358.3	331.9	343.7	337.7	347.1	356.2	366.2	368.3	379.9	362.2	352.3	256.8		
Miscellaneous industries ⁵	422.5	411.8	397.4	374.2	386.7	384.2	382.6	394.0	393.9	388.2	405.1	403.9	394.1	322.7	
Instruments (professional and scientific), and fire-control equipment	532.0	505.9	487.2	491.0	492.6	494.2	489.3	487.1	507.5	499.2	480.8	478.9	1356.9		
Photographic apparatus	456.6	444.1	443.8	438.8	409.7	416.2	422.3	424.2	418.1	421.1	416.8	405.1	311.5		
Optical instruments and ophthalmic goods	419.9	415.2	393.1	421.6	426.7	438.1	444.8	446.3	482.3	458.5	445.3	443.5	439.0		
Pianos, organs, and parts	369.1	361.7	327.9	362.7	367.8	357.9	396.0	421.1	455.5	513.4	500.1	475.6	295.1		
Games, toys, and dolls	624.4	566.8	521.2	510.6	496.7	487.6	493.7	450.1	399.7	469.5	525.9	518.7	160.7		
Buttons	271.9	275.3	254.0	271.7	269.4	269.4	284.3	285.5	275.7	280.8	262.5	245.8	204.1		
Fire extinguishers	606.1	566.7	573.0	595.6	563.4	575.5	541.0	523.2	546.8	520.4	560.6	555.4	1622.9		

See footnotes 1 and 2, table A-5.

TABLE A-8: Estimated Number of Employees in Selected Nonmanufacturing Industries¹

[In thousands]

Industry group and industry	1948										1947			Annual average	
	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	1943	1939
Mining: 11															
Coal:															
Anthracite	76.6	77.5	77.7	76.2	77.4	76.4	76.9	77.4	76.6	76.2	76.2	76.2	78.4	83.6	
Bituminous	404	408	408	378	407	405	296	401	397	404	402	399	397	419	372
Metal:															
Iron	92.0	89.4	88.4	91.7	92.8	91.4	91.7	91.4	90.2	89.7	89.8	89.4	88.7	112.7	92.6
Copper	32.8	33.6	33.7	33.7	33.7	32.7	32.5	31.5	31.0	30.9	31.3	32.0	32.4	35.3	21.1
Lead and zinc	27.0	26.9	26.5	26.6	26.7	26.5	26.8	26.9	27.0	26.9	26.6	26.1	25.8	33.3	25.0
Gold and silver	16.2	13.0	12.0	15.0	16.2	16.4	16.3	16.3	16.1	15.7	15.6	15.4	14.9	21.6	16.3
Miscellaneous	8.1	8.2	8.1	8.4	8.3	8.1	8.5	8.7	8.7	8.6	8.5	8.1	8.0	7.7	26.0
Quarrying and nonmetallic	7.9	7.9	8.0	8.0	7.9	7.7	7.7	7.9	7.8	7.7	7.9	7.8	7.6	14.8	4.2
Crude petroleum and natural gas production ⁴	86.6	87.8	87.8	87.1	86.8	85.1	83.9	80.0	76.8	79.9	83.9	86.4	87.3	80.9	68.6
Transportation and public utilities:															
Class I steam railroads ⁵	1,345	1,350	1,356	1,361	1,352	1,321	1,258	1,316	1,311	1,318	1,331	1,340	1,357	1,355	988
Street railways and busses ⁶	246	248	248	246	249	249	249	249	250	249	249	249	227	194	
Telephone	642	643	647	644	633	630	630	627	623	620	620	614	609	402	318
Telegraph ⁷	34.5	34.7	35.1	36.0	36.1	36.3	36.9	36.9	36.8	36.6	36.7	36.6	36.9	46.9	37.6
Electric light and power	281	284	286	283	279	274	273	271	269	268	269	268	267	211	244
Service:															
Hotels (year-round)	375	373	369	375	379	377	375	377	378	381	378	380	344	323	
Power laundries ⁸	229	232	233	239	238	233	232	231	230	235	237	238	241	232	196
Cleaning and dyeing ⁹	89.5	88.7	89.7	92.6	94.7	93.4	92.5	90.0	86.8	88.9	91.0	92.7	95.6	78.0	58.2

¹ Unless otherwise noted, includes all nonsupervisory employees and working supervisors. Data for the three most recent months are subject to revision without notation. Revised figures for earlier months are identified by an asterisk for the first month's publication of such data.

² Includes production and related workers only.

³ Estimates have been adjusted to levels indicated by Federal Security Agency data through 1946 and have been carried forward from 1946 benchmark levels, thereby providing consistent series.

⁴ Does not include well drilling or rig building.

⁵ Includes all employees at middle of month. Excludes employees of switching and terminal companies. Class I steam railroads include those with over \$1,000,000 annual revenue. Source: Interstate Commerce Commission.

⁶ Includes private and municipal street-railway companies, and affiliated, subsidiary, or successor trolley-bus and motor-bus companies.

⁷ Includes all land-line employees except those compensated on a commission basis. Excludes general and divisional headquarters personnel, trainees in school, and messengers.

TABLE A-9: Indexes of Employment in Selected Nonmanufacturing Industries¹
[1939 average=100]

Industry group and industry	1948												1947				Annual average 1948	Year
	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July		
Mining: ²																		
Coal:																		
Anthracite	91.7	92.7	92.9	91.1	92.6	91.4	91.9	92.6	91.6	91.1	91.5	91.2	91.2	91.2	91.2	91.2	91.2	
Bituminous	108.8	109.7	109.7	101.8	109.6	108.9	79.7	108.0	106.8	108.7	108.3	107.4	106.8	112.1	112.1	112.1	112.1	
Metal	99.3	96.9	95.5	99.1	100.2	98.7	99.0	98.7	97.4	96.9	97.0	96.5	95.8	121.2	121.2	121.2	121.2	
Iron	155.4	158.2	159.6	159.5	159.6	155.0	153.7	149.4	146.8	146.5	148.0	151.3	153.3	123.2	123.2	123.2	123.2	
Copper	107.9	107.7	106.0	106.6	106.9	106.0	107.2	107.9	108.2	107.5	106.6	104.4	103.1	123.2	123.2	123.2	123.2	
Lead and zinc	99.8	79.8	74.0	92.2	99.7	100.6	100.4	100.2	99.9	96.2	95.8	94.8	91.8	122.2	122.2	122.2	122.2	
Gold and silver	30.9	31.4	31.1	32.2	31.9	31.3	32.5	33.3	35.4	33.1	32.5	31.3	30.9	24.2	24.2	24.2	24.2	
Miscellaneous	188.6	188.9	190.0	191.3	188.6	182.9	182.8	180.1	187.0	183.0	187.2	185.7	181.6	322.2	322.2	322.2	322.2	
Quarrying and nonmetallic	126.5	128.3	128.2	127.3	126.8	124.2	122.5	118.2	113.7	116.7	122.6	126.2	127.6	118.1	118.1	118.1	118.1	
Crude petroleum and natural gas production ⁴	113.5	116.4	119.8	119.4	116.7	112.5	111.2	111.1	111.1	110.5	110.4	110.5	111.1	90.0	90.0	90.0	90.0	
Transportation and public utilities:																		
Class I steam railroads ⁵	136.2	136.7	137.3	137.9	136.9	133.8	127.3	133.3	132.7	133.4	134.8	135.7	137.4	137.4	137.4	137.4	137.4	
Street railways and busses ⁶	126.9	127.9	128.1	127.2	128.3	128.5	128.3	128.7	128.6	129.2	128.6	128.7	128.8	117.2	117.2	117.2	117.2	
Telephone	201.9	202.3	203.7	202.8	199.4	198.4	198.3	197.4	196.2	195.0	195.0	193.3	191.6	126.2	126.2	126.2	126.2	
Telegraph ⁷	91.6	92.3	93.3	95.7	96.0	96.3	97.9	98.2	97.8	97.2	97.6	97.2	98.1	124.2	124.2	124.2	124.2	
Electric light and power	115.2	116.2	117.1	118.8	114.1	112.3	111.7	110.9	110.3	109.8	110.3	109.7	109.4	94.8	94.8	94.8	94.8	
Trade: ⁸																		
Wholesale	118.1	117.1	117.0	116.2	115.3	114.5	114.8	115.3	116.1	116.3	117.1	116.5	115.5	94.8	94.8	94.8	94.8	
Retail	116.0	113.4	111.2	112.0	113.6	113.1	112.8	113.8	111.8	114.4	120.2	119.8	115.8	94.8	94.8	94.8	94.8	
Food	113.8	112.0	112.3	113.8	115.5	116.3	116.1	116.7	113.9	114.4	117.4	116.1	115.0	106.0	106.0	106.0	106.0	
General merchandise	135.3	127.2	120.8	121.3	124.8	123.7	123.4	124.5	122.9	129.4	175.5	143.6	131.8	114.0	114.0	114.0	114.0	
Apparel	119.4	113.9	105.1	108.0	115.4	115.2	114.6	116.8	108.2	111.5	136.7	124.0	119.4	110.5	110.5	110.5	110.5	
Furniture and housefurnishings	92.2	91.6	90.1	90.5	91.2	91.9	91.6	91.9	91.0	93.6	97.4	92.4	89.5	67.0	67.0	67.0	67.0	
Automotive	110.0	110.1	111.1	109.8	108.4	107.0	107.1	105.8	105.7	106.5	109.9	107.6	105.6	123.1	123.1	123.1	123.1	
Lumber and building materials	127.8	128.0	129.6	128.2	126.3	123.7	121.9	119.4	118.8	122.5	126.1	126.4	126.9	91.2	91.2	91.2	91.2	
Service:																		
Hotels (year-round)	116.2	115.7	114.6	116.2	117.6	117.0	116.9	116.4	116.8	117.2	118.1	117.1	117.7	106.0	106.0	106.0	106.0	
Power laundries ⁹	116.7	118.4	119.0	122.1	121.6	119.0	118.3	117.7	117.6	120.1	120.9	121.3	123.1	123.1	123.1	123.1	123.1	
Cleaning and dyeing ¹⁰	153.9	152.5	154.3	159.2	162.9	160.6	159.0	154.8	149.3	152.8	156.5	159.4	164.4	134.8	134.8	134.8	134.8	

¹ See footnote 1, table A-8.
² See footnote 2, table A-8.
³ See footnote 3, table A-8.
⁴ See footnote 4, table A-8.

⁵ See footnote 5, table A-8.

⁶ See footnote 6, table A-8.

⁷ See footnote 7, table A-8.

⁸ Data include all nonsupervisory employees and working supervisors.

TABLE A-10: Indexes of Weekly Pay Rolls in Selected Nonmanufacturing Industries¹
[1939 average=100]

Industry group and industry	1948												1947				Annual average 1948	Year
	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July		
Mining: ¹¹																		
Coal:																		
Anthracite	260.4	247.3	260.3	193.3	246.0	246.2	195.4	255.9	232.8	242.4	239.4	224.4	252.7	144.0	144.0	144.0	144.0	
Bituminous	356.2	352.9	365.8	293.0	344.2	344.3	167.4	342.0	320.0	350.5	345.8	327.4	327.5	203.0	203.0	203.0	203.0	
Metal	224.9	211.2	210.4	202.2	208.2	206.1	201.7	201.3	201.7	198.9	198.8	198.8	192.7	192.7	192.7	192.7	192.7	192.7
Iron	371.6	361.0	355.8	331.5	345.0	336.3	319.7	313.8	310.3	302.7	301.1	310.2	315.5	257.0	257.0	257.0	257.0	
Copper	255.6	247.6	254.8	242.4	232.9	232.6	232.6	234.8	241.7	238.0	236.5	224.7	222.9	214.0	214.0	214.0	214.0	
Lead and zinc	252.7	199.2	189.1	193.2	238.1	238.9	235.8	232.8	235.0	228.1	231.6	220.6	209.7	226.0	226.0	226.0	226.0	
Gold and silver	56.4	54.1	56.1	57.1	54.2	54.6	55.2	56.7	58.4	56.4	56.8	53.7	51.7	37.0	37.0	37.0	37.0	
Miscellaneous	405.0	406.7	387.5	383.0	360.7	352.5	343.1	349.2	347.4	348.4	349.2	346.7	338.1	300.0	300.0	300.0	300.0	
Quarrying and nonmetallic	345.2	342.4	348.5	329.7	*329.1	312.5	295.4	272.7	262.0	272.8	295.3	305.7	319.2	196.0	196.0	196.0	196.0	
Crude petroleum and natural gas production ¹²	230.7	235.6	251.0	240.8	227.1	223.4	213.4	208.3	219.9	215.5	203.2	211.0	199.9	123.2	123.2	123.2	123.2	
Transportation and public utilities:																		
Class I steam railroads	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	70.0	70.0	70.0	70.0	
Street railways and busses ¹³	242.0	237.7	240.7	232.2	231.2	228.1	227.1	232.6	234.7	230.1	226.7	223.6	223.2	155.0	155.0	155.0	155.0	
Telephone	338.2	335.4	331.7	336.1	327.1	326.1	317.7	314.7	316.3	315.8	313.0	321.5	314.2	144.0	144.0	144.0	144.0	
Telegraph ¹⁴	217.4	220.4	225.5	233.2	228.5	231.1	224.8	213.0	212.6	209.5	207.8	206.8	208.1	159.0	159.0	159.0	159.0	
Electric light and power	204.5	204.3	204.9	202.8	196.4	192.1	188.6	184.4	188.2	187.9	185.7	187.6	182.8	126.0	126.0	126		

TABLE A-11: Federal Civilian Employment by Branch and Agency Group¹

Year and month	All branches	Executive ²				Legislative	Judicial	Government corporations ³
		Total	Defense agencies ⁴	Post Office Department ⁵	All other agencies			
Total (including areas outside continental United States)								
91. 2	968, 596	935, 493	207, 979	319, 474	408, 040	5, 373	2, 200	25, 470
100. 8	3, 183, 235	3, 138, 838	2, 304, 752	364, 002	469, 994	6, 171	2, 636	35, 590
95. 8	2, 002, 385	1, 962, 042	901, 197	425, 005	635, 840	7, 118	3, 430	29, 795
153. 3	2, 006, 412	1, 966, 339	905, 251	429, 789	631, 299	7, 068	3, 453	29, 552
103. 1	2, 229, 164	2, 189, 436	894, 855	667, 912	626, 669	7, 046	3, 450	29, 232
91. 8	1, 985, 792	1, 946, 076	890, 719	432, 920	622, 437	7, 046	3, 461	29, 209
30. 9	1, 992, 166	1, 952, 537	895, 850	432, 700	623, 987	7, 101	3, 470	29, 058
181. 6	2, 004, 136	1, 964, 337	897, 917	439, 521	626, 899	7, 217	3, 462	29, 120
127. 6	2, 020, 629	1, 981, 002	903, 814	449, 264	627, 924	7, 186	3, 461	28, 980
111. 1	2, 038, 851	1, 990, 238	909, 885	455, 711	633, 642	7, 257	3, 468	28, 888
137. 4	2, 063, 854	2, 014, 457	916, 864	468, 248	639, 345	7, 308	3, 450	28, 630
June	2, 083, 942	2, 044, 356	919, 784	471, 202	653, 370	7, 305	3, 477	28, 804
July	2, 094, 608	2, 055, 418	924, 555	476, 429	654, 434	7, 341	3, 495	28, 354
August	2, 108, 253	2, 068, 710	933, 237	481, 615	653, 858	7, 377	3, 485	28, 681
September	2, 102, 850	2, 063, 766	932, 104	485, 077	646, 585	7, 355	3, 500	28, 220
Continental United States								
15. 5	926, 659	897, 602	179, 381	318, 802	390, 419	5, 373	2, 180	21, 504
15. 8	2, 913, 534	2, 875, 928	2, 057, 696	363, 297	454, 935	6, 171	2, 546	28, 889
15. 0	1, 764, 384	1, 731, 411	699, 815	423, 473	608, 123	7, 118	3, 358	22, 497
05. 6	1, 771, 360	1, 738, 587	706, 418	428, 282	603, 917	7, 068	3, 381	22, 324
26. 9	2, 005, 563	1, 973, 066	708, 099	665, 662	599, 305	7, 046	3, 377	22, 074
23. 1	1, 763, 209	1, 730, 875	704, 251	431, 393	595, 231	7, 046	3, 388	21, 990
64. 4	1, 766, 134	1, 733, 702	705, 792	431, 218	596, 692	7, 101	3, 396	21, 935
March	1, 778, 602	1, 745, 873	708, 934	437, 946	598, 903	7, 217	3, 388	22, 024
April	1, 791, 678	1, 759, 098	710, 991	447, 682	600, 425	7, 186	3, 387	22, 007
May	1, 808, 661	1, 776, 142	717, 072	454, 126	604, 944	7, 257	3, 394	21, 868
June	1, 823, 900	1, 791, 498	724, 683	456, 637	610, 178	7, 308	3, 388	21, 706
July	1, 857, 830	1, 825, 196	732, 217	469, 609	623, 370	7, 305	3, 406	21, 923
August	1, 875, 130	1, 842, 454	742, 925	474, 806	624, 723	7, 341	3, 424	21, 911
September	1, 893, 218	1, 860, 620	756, 512	479, 984	624, 124	7, 377	3, 409	21, 812
October	1, 895, 534	1, 862, 973	762, 701	483, 371	616, 901	7, 355	3, 426	21, 780

¹ Employment represents an average for the year or is as of the first of the month. Data for the legislative and judicial branches and for all Government corporations except the Panama R. R. Co. are reported directly to the Bureau of Labor Statistics. Data for the executive branch and for the Panama R. R. Co. are reported through the Civil Service Commission but differ from those published by the Civil Service Commission in the following respects: (1) Exclude seamen and trainees who are hired and paid by private steamship companies having contracts with the Maritime Commission, included by Civil Service Commission starting January 1947; (2) exclude substitute rural mail carriers, included by the Civil Service Commission since September 1945; (3) include in December the additional postal employment necessitated by the Christmas season, excluded from published Civil Service Commission figures starting 1942; (4) include an upward adjustment to Post Office Department employment prior to December 1943 to convert temporary substitute employees from a full-time equivalent to a name-count basis, the latter being the basis on which data for subsequent months have been reported; (5) the Panama R. R. Co. is shown under Government corporations here, but is included under the executive branch by the Civil Service Commission; (6) employment published by the Civil Service Commission as of the last day of the month is presented here as of the first day of the next month.

Data for Central Intelligence Agency are excluded starting August 1947.

From 1939 through June 1943, employment was reported for all areas monthly and employment within continental United States was secured by deducting the number of persons outside the continental area, which was

estimated from actual reports as of January 1939 and 1940 and of July 1941 and 1943. From July 1943, through December 1946, employment within continental United States was reported monthly and the number of persons outside the country (estimated from quarterly reports) was added to secure employment in all areas. Beginning January 1947, employment is reported monthly both inside and outside continental United States.

² Data for current months cover the following corporations: Federal Reserve banks, mixed ownership banks of the Farm Credit Administration, and the Panama R. R. Co. Data for earlier years include at various times the following additional corporations: Inland Waterways Corporation, Spruce Production Corporation, and certain employees of the Federal Deposit Insurance Corporation and of the Office of the Comptroller of the Currency, Treasury Department. Corporations not included in this column are under the executive branch.

³ Covers the National Military Establishment, Maritime Commission, National Advisory Committee for Aeronautics, The Panama Canal, and until their abolition or amalgamation with a peacetime agency, the agencies created specifically to meet war and reconversion emergencies.

⁴ For ways in which data differ from published figures of the Civil Service Commission, see footnote 1. Employment figures include fourth-class postmasters in all months. Prior to July 1945, clerks at third-class post offices were hired on a contract basis and therefore, because of being private employees, are excluded here. They are included beginning July 1945, however, when they were placed on the regular Federal pay roll by congressional action.

TABLE A-12: Federal Civilian Pay Rolls by Branch and Agency Group¹

[In thousands]

Year and month	All branches	Executive ²			Legislative	Judicial	Government corporations
		Total	Defense agencies ³	Post Office Department ⁴			
Total (including areas outside continental United States)							
1939.....	\$1,757,292	\$1,692,824	\$357,628	\$586,347	\$748,849	\$14,767	\$6,691
1944 ⁵	8,301,111	8,206,411	6,178,387	804,947	1,163,077	18,127	9,274
1947: October.....	481,401	471,908	203,892	90,713	168,333	2,457	1,334
November.....	451,502	442,171	192,111	98,666	151,394	2,457	1,192
December.....	531,452	521,924	214,051	143,537	164,336	2,462	1,336
1948: January.....	483,071	473,466	211,495	100,395	161,576	2,442	1,346
February.....	445,134	435,894	191,372	98,054	146,468	2,414	1,199
March.....	498,325	488,676	218,706	102,124	167,846	2,409	1,343
April.....	477,620	468,100	204,606	100,894	162,600	2,482	1,322
May.....	474,725	465,356	205,912	100,925	158,519	2,469	1,207
June.....	505,345	495,792	225,440	102,653	167,699	2,536	1,279
July.....	528,437	518,639	223,968	121,677	172,904	2,600	1,301
August.....	546,551	536,653	230,147	122,320	184,186	2,695	1,390
September.....	542,507	542,658	235,730	121,908	185,020	2,694	1,453
October.....	533,089	523,190	225,165	121,762	176,263	2,656	1,454
Continental United States							
1944 ⁵	\$7,628,017	\$7,540,825	\$5,553,166	\$862,271	\$1,125,388	\$18,127	\$8,878
1947: October.....	443,408	434,545	173,717	90,356	161,472	2,457	1,297
November.....	414,020	405,485	162,219	98,313	144,953	2,457	1,154
December.....	491,727	482,884	182,109	143,057	157,718	2,462	1,301
1948: January.....	443,259	434,366	179,395	100,082	154,919	2,442	1,309
February.....	408,614	399,975	161,996	97,703	140,276	2,414	1,165
March.....	456,878	447,901	185,284	101,765	160,852	2,499	1,305
April.....	439,691	430,845	174,400	100,543	155,893	2,482	1,287
May.....	434,657	426,011	174,209	100,570	151,232	2,469	1,174
June.....	461,406	452,520	189,974	102,306	160,249	2,536	1,242
July.....	457,057	478,016	191,686	121,263	165,067	2,600	1,263
August.....	504,040	494,839	197,058	121,906	175,875	2,695	1,351
September.....	509,588	500,391	202,274	121,479	176,638	2,694	1,414
October.....	493,461	484,217	194,562	121,332	168,323	2,656	1,413

¹ Data are from a series revised June 1947 to adjust pay rolls, which from July 1945 until December 1946 were reported for pay periods ending during the month, to cover the entire calendar month. Data for the executive branch and for the Panama R. R. Co. are reported through the Civil Service Commission. Data for the legislative and judicial branches and for all Government corporations except the Panama R. R. Co. are reported directly to the Bureau of Labor Statistics. Data for Central Intelligence Agency are excluded starting July 1947.

² From 1939 through May 1943, pay rolls were reported for all areas monthly. Beginning June 1943, some agencies reported pay rolls for all areas and some reported pay rolls for the continental area only. Pay rolls for areas outside continental United States from June 1943 through November 1946 (except for the National Military Establishment for which these data were reported monthly during most of this period) were secured by multiplying employment in these areas (see footnote 2, table A-11, for derivation of the employ-

ment) by the average pay per person in March 1944, as revealed in a survey as of that date, adjusted for the salary increases given in July 1945 and July 1946. Beginning December 1946 pay rolls for areas outside the country are reported monthly by most agencies.

³ See footnote 3, table A-11.

⁴ See footnote 4, table A-11.

⁵ Beginning July 1945, pay is included of clerks at third-class post offices who previously were hired on a contract basis and therefore were private employees and of fourth-class postmasters who previously were compensated by the retention of a part of the postal receipts. Both these groups were placed on a regular salary basis in July 1945 by congressional action.

⁶ Data are shown for 1944, instead of 1943 as in the other Federal tables because pay rolls for employment in areas outside continental United States are not available prior to June 1943.

TABLE A-13: Civilian Government Employment and Pay Rolls in Washington, D. C., by Branch and Agency Group¹

Year and month	Total government	District of Columbia Government	Total	Federal					
				Executive				Legislative	Judicial
				All agencies	Defense agencies ²	Post Office Department ³	All other agencies		
Employment ⁴									
October	143,548	13,978	129,570	123,773	18,761	5,009	99,913	5,373	424
November	300,914	16,874	285,040	278,363	144,319	8,273	125,771	6,171	506
December	221,236	18,303	202,933	195,239	64,505	7,284	123,450	7,118	576
January	221,481	18,381	203,100	195,448	64,548	7,281	123,619	7,068	584
February	224,375	18,418	205,957	198,331	64,715	10,156	123,460	7,046	580
March	221,794	18,448	203,346	195,714	65,065	7,258	123,391	7,046	586
April	224,517	18,625	205,892	198,201	65,543	7,235	125,423	7,101	590
May	226,256	18,668	207,588	199,784	66,050	7,412	126,322	7,217	587
June	227,620	18,628	206,001	201,227	66,635	7,396	127,196	7,186	588
July	228,864	18,669	210,195	202,350	67,212	7,380	127,758	7,257	588
August	229,526	18,848	210,578	202,782	67,592	7,387	127,803	7,308	588
September	233,308	19,294	214,014	206,110	69,056	7,499	129,555	7,305	599
October	234,252	18,881	215,371	207,438	70,217	7,486	129,735	7,341	592
November	234,684	18,474	216,210	208,245	70,783	7,551	129,911	7,377	588
December	232,580	18,600	213,980	208,036	70,685	7,589	129,762	7,355	589
Pay rolls (in thousands)									
October	\$305,741	\$25,226	\$280,515	\$264,541	\$37,825	\$12,524	\$214,192	\$14,765	\$1,209
November	737,702	32,884	704,908	685,510	352,007	20,070	313,433	17,785	1,613
December	64,467	4,496	59,971	57,298	16,806	2,744	37,748	2,457	216
January	59,400	4,223	55,177	52,525	16,110	2,606	33,809	2,457	195
February	64,111	4,570	59,541	56,861	17,235	3,135	36,491	2,462	218
March	63,295	4,400	58,796	56,141	16,656	2,776	36,709	2,442	213
April	57,991	4,281	53,710	51,099	15,910	2,165	33,024	2,414	197
May	65,336	4,518	60,818	58,104	17,900	2,340	37,864	2,499	215
June	62,987	4,495	58,492	55,799	16,324	2,277	37,198	2,452	211
July	63,492	4,422	59,070	56,400	18,045	2,234	36,121	2,469	201
August	66,658	4,561	62,097	59,350	19,250	2,300	37,800	2,536	211
September	67,208	3,461	63,747	60,931	*20,235	2,651	38,045	2,600	216
October	71,359	3,480	67,879	64,956	21,114	2,695	41,147	2,695	228
November	73,633	4,606	69,027	66,104	21,987	2,722	41,395	2,694	229
December	70,891	4,452	66,439	63,555	21,028	2,765	39,762	2,656	228

Data for the legislative and judicial branches and District of Columbia government are reported to the Bureau of Labor Statistics. Data for the executive branch are reported through the Civil Service Commission but differ from those published by the Civil Service Commission in the following respects: (1) include in December the temporary additional postal employment necessitated by the Christmas season, excluded from published Civil Service Commission figures starting 1942; (2) include an upward adjustment in Post Office Department employment prior to December 1943 to convert temporary substitute employees from a full-time equivalent to a namebasis, the latter being the basis on which data for subsequent months have been reported; (3) exclude persons working without compensation or for a year or month, included by the Civil Service Commission from June through November 1943; (4) employment published by the Civil Service Commission as of the last day of the month is presented here as of the first day of the next month.

Beginning January 1942, data for the executive branch cover, in addition to the area inside the District of Columbia, the adjacent sections of Maryland and Virginia which are defined by the Bureau of the Census as in the metro-

politan area. Data for Central Intelligence Agency are excluded starting August 1947 for employment and July 1947 for pay rolls.

² Covers the National Military Establishment, Maritime Commission, National Advisory Committee for Aeronautics, The Panama Canal, and until their abolition or amalgamation with a peacetime agency, the agencies created specifically to meet war and reconversion emergencies.

³ For ways in which data differ from published figures of the Civil Service Commission, see footnote 1.

⁴ Yearly figures represent averages. Monthly figures represent (1) the number of regular employees in pay status on the first day of the month plus the number of intermittent employees who were paid during the preceding month for the executive branch, (2) the number of employees on the pay roll with pay during the pay period ending just before the first of the month for the legislative and judicial branches, and (3) the number of employees on the pay roll with pay during the pay period ending on or just before the last of the month for the District of Columbia Government.

*Revised.

TABLE A-14: Personnel and Pay in Military Branch of Federal Government¹

[In thousands]

Year and month	Personnel (average for year or as of first of month) ²					Type of pay				
	Total	Army and Air Forces ³	Navy	Marine Corps	Coast Guard	Total	Pay rolls ⁴	Mustering-out pay ⁵	Family allowances ⁶	Leave payments ⁷
1939	345	192	124	19	10	\$331,523	\$331,523	-	-	-
1943	8,944	6,733	1,744	311	156	11,181,079	10,148,745	-	-	\$1,032,334
1947: October	1,543	941	491	92	19	355,961	271,040	9,954	25,145	46,000
November	1,490	920	459	92	19	309,705	252,112	9,117	23,127	25,000
December	1,463	911	445	87	20	300,257	246,532	13,293	23,827	16,000
1948: January	1,422	898	421	83	20	300,241	250,953	13,465	23,454	12,000
February	1,419	905	414	80	20	281,423	240,493	11,838	23,566	12,000
March	1,422	909	413	80	20	285,011	242,900	13,060	24,997	12,000
April	1,417	906	412	79	20	285,210	247,452	9,751	25,414	12,000
May	1,419	916	403	80	20	278,967	242,262	9,057	25,736	12,000
June	1,430	930	407	82	20	277,368	243,239	5,756	26,478	12,000
July	1,403	940	420	84	20	276,590	246,422	2,516	26,353	12,000
August	1,514	979	430	86	21	278,234	244,547	3,955	27,756	12,000
September	1,548	1,010	432	86	21	292,040	251,398	9,292	28,115	12,000
October	1,584	1,042	438	84	21	294,813	259,175	5,787	28,253	12,000

¹ Except for Army personnel for 1939 which is from the Annual Report of the Secretary of War, all data are from reports submitted to the Bureau of Labor Statistics by the various military branches. Because of rounding, totals will not necessarily add to the sum of the items shown.

² Includes personnel on active duty, the missing, those in the hands of the enemy, and those on terminal leave through October 1, 1947, when lump-sum terminal-leave payments at time of discharge were started.

³ Prior to March 1944, data include persons on induction furlough. Prior to June 1942 and after April 1948, Philippine Scouts are included.

⁴ Pay rolls are for personnel on active duty; they include payment of personnel while on terminal leave through September 1947. For officers this applies to all prior periods and for enlisted personnel back to October 1, 1946, only. Beginning October 1, 1947, they include lump-sum terminal-leave payments made at time of discharge. Coast Guard pay rolls for all periods and Army pay rolls through April 1947 represent actual expenditures. Other

data represent estimated obligations based on an average monthly personnel count. Pay rolls for the Navy and Coast Guard include cash payments, clothing-allowance balances in January, April, July, and October.

⁵ Represents actual expenditures.

⁶ Represents Government's contribution. The men's share is included in the pay rolls.

⁷ Leave payments were authorized by Public Law 704 of the 75th Congress and were continued by Public Law 254 of the 80th Congress to enlisted personnel discharged prior to September 1, 1946, for accrued and unused leave and to officers and enlisted personnel then on active duty for leave accrued in excess of 60 days. Value of bonds (representing face value, to which interest is added when bonds are cashed) and cash payments are included. Lump-sum payments for terminal leave, which were authorized by Public Law 360 of the 80th Congress, and which were started in October 1947, excluded here and included under pay rolls.

B: Labor Turn-Over

TABLE B-1: Monthly Labor Turn-Over Rates (Per 100 Employees) in Manufacturing Industries by Class of Turn-Over¹

Class of turn-over and year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Total accession:												
1948	4.6	3.9	4.0	4.0	4.1	5.7	4.7	5.0	3.4.9	-	-	-
1947	6.0	5.0	5.1	5.1	4.8	5.5	4.9	5.3	5.9	5.5	4.8	4.8
1946	8.5	6.8	7.1	6.7	6.1	6.7	7.4	7.0	7.1	6.8	5.7	5.7
1943	8.3	7.9	8.3	7.4	7.2	8.4	7.8	7.6	7.7	7.2	6.6	6.6
1939 ²	4.1	3.1	3.3	2.9	3.3	3.9	4.2	5.1	6.2	5.9	4.1	4.1
Total separation:												
1948	4.3	4.2	4.5	4.7	4.3	4.5	4.4	5.1	3.5.5	-	-	-
1947	4.9	4.5	4.9	5.2	5.4	4.7	4.6	5.3	5.9	5.0	4.0	4.0
1946	6.8	6.3	6.6	6.3	6.3	5.7	5.8	6.6	6.9	6.3	4.9	4.9
1943	7.1	7.1	7.7	7.5	6.7	7.1	7.6	8.3	8.1	7.0	6.4	6.4
1939 ²	3.2	2.6	3.1	3.5	3.5	3.3	3.3	3.0	2.8	2.9	3.0	3.0
Quit: ³												
1948	2.6	2.5	2.8	3.0	2.8	2.9	2.9	3.4	3.3.9	-	-	-
1947	3.5	3.2	3.5	3.7	3.5	3.1	3.1	4.0	4.5	3.6	2.7	2.7
1946	4.3	3.9	4.2	4.3	4.2	4.0	4.6	5.3	5.3	4.7	3.7	3.7
1943	4.5	4.7	5.4	5.4	4.8	5.2	5.6	6.3	6.3	5.2	4.5	4.5
1939 ²	.9	.6	.8	.8	.7	.7	.7	.8	1.1	.9	.8	.8
Discharge:												
1948	.4	.4	.4	.4	.3	.4	.4	.4	1.4	-	-	-
1947	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4
1946	.5	.5	.4	.4	.4	.3	.4	.4	.4	.4	.4	.4
1943	.5	.5	.6	.5	.6	.6	.7	.7	.6	.6	.6	.6
1939 ²	.1	.1	.1	.1	.1	.1	.1	.1	.1	.2	.2	.2
Lay-off: ⁴												
1948	1.2	1.2	1.2	1.2	1.1	1.1	1.0	1.2	1.0	-	-	-
1947	.9	.8	.9	1.0	1.4	1.1	1.0	.8	.9	.9	.8	.8
1946	1.8	1.7	1.8	1.4	1.5	1.2	.6	.7	1.0	1.0	.7	.7
1943	.7	.5	.5	.6	.5	.5	.5	.5	.5	.5	.7	.7
1939 ²	2.2	1.9	2.2	2.6	2.7	2.5	2.5	2.1	1.6	1.8	2.0	2.0
Miscellaneous, including military: ⁵												
1948	.1	.1	.1	.1	.1	.1	.1	.1	1.2	-	-	-
1947	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1
1946	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.1	.1
1943	1.4	1.4	1.2	1.0	.8	.8	.8	.8	.7	.7	.6	.6

¹ Month-to-month changes in total employment in manufacturing industries as indicated by labor turn-over rates are not precisely comparable to those shown by the Bureau's employment and pay-roll reports, as the former are based on data for the entire month, while the latter, for the most part, refer to a 1-week period ending nearest the 15th of the month. The turn-over sample is not so extensive as that of the employment and pay-roll survey—proportionately fewer small plants are included; printing and publishing, and certain seasonal industries such as canning and preserving, are

not covered. Plants on strike are also excluded. See Note, table B-2.

² Preliminary figures.

³ Prior to 1943, rates relate to wage earners only.

⁴ Prior to September 1940, miscellaneous separations were included in quits.

⁵ Including temporary, indeterminate (of more than 7 days' duration) and permanent lay-offs.

TABLE B-2: Monthly Labor Turn-Over Rates (Per 100 Employees) in Selected Groups and Industries¹

Industry	Total accession		Separation									
			Total		Quit		Discharge		Lay-off		Miscellaneous, including military	
	Sept. ² 1948	Aug. 1948	Sept. ² 1948	Aug. 1948								
MANUFACTURING												
Durable goods	5.1	5.0	5.5	5.3	3.9	3.4	0.4	0.4	1.0	1.3	0.2	0.2
Durable goods	4.8	5.0	5.3	5.0	3.8	3.4	.4	.4	1.0	1.1	.1	.1
Durable goods												
Iron and steel and their products	4.4	4.3	4.8	4.1	3.8	3.1	.4	.4	.4	.4	.2	.2
Blast furnaces, steel works, and rolling mills	3.5	3.4	4.2	3.2	3.6	2.7	.2	.2	.1	.1	.3	.2
Gray-iron castings	6.5	6.0	6.7	5.6	4.8	4.3	.6	.7	1.1	.5	.2	.1
Malleable-iron castings	5.5	5.9	6.9	5.7	5.6	4.6	.5	.6	.5	.3	.3	.2
Steel castings	5.0	5.5	5.8	4.8	4.4	3.7	.6	.6	.4	.2	.1	.1
Cast-iron pipe and fittings	4.8	4.4	3.4	3.2	2.9	2.8	.3	.2	.1	.1	.1	.1
Tin cans and other tinware	8.6	11.7	11.4	10.0	6.1	7.0	2.6	1.8	2.6	1.1	.1	.1
Wire products	3.4	3.5	4.0	3.5	2.6	2.2	.3	.4	.9	.7	.2	.2
Cutlery and edge tools	4.2	5.3	3.3	3.4	2.6	2.2	.3	.3	.2	.8	.2	.1
Tools (except edge tools, machine tools, files, and saws)	3.3	3.3	5.0	3.8	3.2	2.5	.4	.5	1.2	.7	.2	.1
Hardware	5.7	4.1	5.2	4.3	4.2	3.5	.5	.4	.3	.3	.2	.1
Stoves, oil burners, and heating equipment	7.0	7.5	6.0	5.5	5.0	4.0	.5	.6	.3	.7	.2	.2
Steam and hot-water heating apparatus and steam fittings	4.2	5.1	4.8	5.4	3.3	4.0	.7	.6	.7	.7	.1	.1
Stamped and enameled ware and galvanizing	5.3	4.9	6.4	5.9	4.6	3.9	.4	.5	1.2	1.3	.2	.2
Fabricated structural-metal products	5.5	5.7	4.8	4.6	3.3	2.7	.3	.4	1.1	1.4	.1	.1
Bolts, nuts, washers, and rivets	2.7	2.8	3.5	2.9	2.6	2.1	.4	.4	.3	.2	.2	.2
Forgings, iron and steel	4.4	5.2	4.0	3.7	3.1	2.5	.3	.5	.5	.5	.1	.2
Industrial machinery	4.3	3.6	4.4	3.5	3.1	2.1	.3	.3	.9	1.0	.1	.1
Electrical equipment for industrial use	2.4	2.1	3.4	2.0	1.9	1.3	.2	.1	1.1	.5	.2	.1
Radios, radio equipment, and phonographs	7.6	6.3	5.7	5.1	4.5	2.9	.5	.5	.5	1.6	.2	.1
Communication equipment, except radios	2.6	1.8	4.2	2.7	2.8	2.0	.1	.1	1.2	.5	.1	.1
Machinery, except electrical	4.0	3.5	5.0	4.5	3.1	2.7	.4	.3	1.3	1.3	.2	.2
Engines and turbines	4.8	4.9	5.8	5.8	2.8	2.2	.3	.4	2.6	3.0	.1	.2
Agricultural machinery and tractors	6.4	4.3	7.2	6.5	3.8	3.7	.4	.4	2.7	2.1	.3	.3
Machine tools	2.8	2.2	4.3	2.5	2.4	1.6	.3	.3	1.4	.5	.2	.1
Machine-tool accessories	3.8	3.4	4.4	3.7	2.1	2.1	.4	.4	1.8	1.1	.1	.1
Metalworking machinery and equipment, not elsewhere classified	3.2	3.1	3.5	3.8	2.7	2.8	.4	.3	.3	.5	.1	.2
General industrial machinery, except pumps	3.7	3.7	4.3	4.0	3.2	2.8	.5	.4	.4	.6	.2	.2
Pumps and pumping equipment	2.5	2.9	3.5	3.5	2.9	2.1	.3	.4	.2	.9	.1	.1
Transportation equipment, except automobiles	6.4	6.7	5.8	6.8	3.4	2.7	.3	.4	1.9	3.5	.2	.2
Aircraft	5.8	6.1	5.1	4.1	4.0	2.9	.2	.3	.8	.8	.1	.1
Aircraft parts, including engines	4.3	3.5	3.3	2.4	2.3	1.5	.2	.2	.7	.6	.1	.1
Shipbuilding and repairs	(?)	9.3	(?)	13.5	(?)	2.8	(?)	.6	(?)	10.0	(?)	.1
Automobiles	5.5	5.6	4.7	8.1	3.3	3.9	.3	.6	1.0	3.4	.1	.2
Motor vehicles, bodies, and trailers	6.1	6.0	4.4	9.4	3.3	4.2	.3	.6	.7	4.4	.1	.2
Motor-vehicle parts and accessories	4.0	4.9	6.1	5.4	3.4	3.3	.5	.6	2.0	1.3	.2	.2
Nonferrous metals and their products	4.5	4.7	5.5	4.4	3.5	2.8	.5	.5	1.3	1.0	.2	.1
Primary smelting and refining, except aluminum and magnesium	2.8	2.6	3.6	2.6	2.8	1.7	.4	.5	.2	.2	.2	.2
Rolling and drawing of copper and copper alloys	3.0	3.4	3.2	2.2	2.1	1.6	.3	.3	.6	.2	.1	.1
Lighting equipment	5.8	4.8	6.8	4.2	3.8	2.3	.6	.2	2.3	1.6	.1	.1
Nonferrous-metal foundries, except aluminum and magnesium	5.3	5.9	6.3	4.6	4.8	3.5	.6	.5	.7	.5	.2	.1
Lumber and timber basic products	7.0	7.5	8.5	7.4	6.6	6.0	.3	.4	1.8	.9	.1	.1
Sawmills	5.6	7.4	7.6	7.1	5.9	5.8	.3	.5	1.4	.8	(?)	.1
Planing and plywood mills	5.9	5.3	6.1	5.2	4.7	4.1	.3	.3	1.0	.8	.1	(?)
Furniture and finished lumber products	7.1	7.6	7.4	6.5	5.7	5.0	.6	.6	1.0	.8	.1	.1
Furniture, including mattresses and bedsprings	7.5	8.0	7.7	6.6	5.9	5.1	.7	.7	1.0	.6	.1	.2
Glass, clay, and glass products	5.0	4.6	4.7	4.6	3.6	3.1	.4	.4	.5	.9	.2	.2
Glass and glass products	6.6	5.0	4.6	5.0	3.1	2.5	.4	.3	.8	2.0	.3	.2
Cement	4.5	4.1	4.5	4.4	3.6	3.4	.5	.6	.2	.2	.2	.2
Brick, tile, and terra cotta	5.1	5.5	6.3	5.3	5.0	4.2	.6	.7	.6	.3	.1	.1
Pottery and related products	5.1	5.3	4.7	4.1	4.0	3.2	.4	.5	.1	.3	.2	.1

Footnotes at end of table.

TABLE B-2: Monthly Labor Turn-Over Rates (Per 100 Employees) in Selected Groups of Industries¹—Continued

Industry	Total accession		Separation										Miscellaneous including military	
			Total		Quit		Discharge		Lay-off					
	Sept. 1 1948	Aug. 1948	Sept. 1 1948	Aug. 1948										
MANUFACTURING—Continued														
<i>Nondurable goods</i>														
Textile-mill products	4.0	4.2	4.8	4.6	3.4	3.2	0.3	0.3	1.0	1.0	0.1			
Cotton	4.4	4.7	5.2	5.0	3.9	3.7	.4	.4	.8	.8	.1			
Silk and rayon goods	4.6	4.5	4.8	4.3	3.5	3.0	.4	.3	.9	.9	.1			
Woolen and worsted, except dyeing and finishing	3.0	3.2	5.4	4.7	2.6	2.2	.4	.3	2.2	2.0	.2			
Hosiery, full-fashioned	4.6	3.8	3.6	3.5	3.1	3.1	.2	.2	.1	.1	.1			
Hosiery, seamless	3.3	4.9	6.4	7.3	2.9	3.9	.2	.1	3.0	3.1	.3			
Knitted underwear	4.3	3.7	5.4	5.5	3.5	3.6	.3	.3	1.6	1.5	(6)			
Dyeing and finishing textiles, including woolen and worsted	2.1	2.4	3.2	4.0	1.7	1.8	.3	.4	1.0	1.7	.2			
Apparel and other finished textile products	5.7	6.2	5.3	5.6	4.4	4.4	.3	.3	.6	.9	(6)			
Men's and boys' suits, coats, and overcoats	3.9	4.8	3.5	3.9	2.6	3.2	.1	.2	.8	.5	(6)			
Men's and boys' furnishings, work clothing, and allied garments	6.6	7.3	6.2	6.6	5.8	5.3	.2	.2	.2	1.1	(6)			
Leather and leather products	3.9	4.8	5.2	5.3	4.5	4.0	.2	.3	.4	.9	.1			
Leather	2.3	3.2	3.5	2.9	2.7	2.0	.1	.2	.6	.6	.1			
Boots and shoes	4.3	5.1	5.5	5.6	4.9	4.4	.2	.3	.3	.8	.1			
Food and kindred products	6.6	7.2	7.3	7.3	4.7	4.1	.6	.6	1.8	2.4	.2			
Meat products	6.4	6.2	7.6	8.8	4.2	4.2	.8	.7	2.3	3.7	.3			
Grain-mill products	6.4	6.8	7.8	6.1	6.5	4.7	.6	.5	.7	.7	(6)			
Tobacco manufactures	5.6	6.6	4.5	4.5	3.9	3.8	.3	.2	.2	.4	.1			
Paper and allied products	3.8	4.0	4.9	4.0	3.9	3.1	.4	.4	.5	.3	.1			
Paper and pulp	3.1	3.3	4.5	3.5	3.5	2.7	.3	.3	.6	.3	.1			
Paper boxes	5.8	5.8	6.0	5.1	4.9	4.2	.6	.5	.4	.3	.1			
Chemicals and allied products	2.3	2.3	3.1	2.5	2.3	1.7	.3	.3	.4	.4	.1			
Paints, varnishes, and colors	2.9	3.2	4.7	3.5	3.1	2.3	.3	.3	1.3	.8	(6)			
Rayon and allied products	1.6	1.6	2.3	1.5	1.5	1.1	.2	.1	.4	.2	.2			
Industrial chemicals, except explosives	2.4	2.5	3.3	2.8	2.5	1.9	.3	.4	.4	.4	.1			
Products of petroleum and coal	1.3	1.4	2.0	1.8	1.4	1.0	.1	.1	.3	.1	.2			
Petroleum refining	.9	1.1	1.6	1.1	1.2	.8	(6)	.1	.2	.1	.2			
Rubber products	4.0	3.5	4.2	3.1	3.5	2.4	.2	.2	.4	.3	.1			
Rubber tires and inner tubes	2.1	2.0	3.2	2.1	2.4	1.5	.1	.1	.5	.3	.2			
Rubber footwear and related products	6.1	6.7	5.4	4.4	5.0	3.7	.2	.2	(6)	.3	.2			
Miscellaneous rubber industries	5.6	4.5	5.0	4.4	4.0	3.3	.4	.4	.5	.6	.1			
Miscellaneous industries	4.1	3.6	4.0	2.9	3.0	2.0	.2	.2	.7	.5	.1			
NONMANUFACTURING														
Metal mining	5.9	5.8	7.2	5.7	6.3	4.9	.4	.4	.3	.2	.2			
Iron-ore	2.7	3.7	4.3	3.6	3.9	3.1	.1	.1	(6)	.1	.3			
Copper-ore	6.9	5.8	7.8	6.0	7.2	5.4	.3	.3	.2	.2	.1			
Lead- and zinc-ore	10.1	9.4	10.9	8.7	8.8	6.7	1.1	1.4	.9	.4	.1			
Coal mining:														
Anthracite	1.8	1.8	1.9	1.9	1.5	1.6	(6)	(6)	.2	.2	.2			
Bituminous	4.0	3.7	4.0	3.5	3.4	2.9	.1	.1	.3	.3	.2			
Public utilities:														
Telephone	(6)	2.7	(6)	2.6	(6)	2.2	(6)	.1	(6)	.2	.2			
Telegraph	1.2	1.6	3.0	2.8	1.9	1.9	.1	.2	.9	.6	(6)			

¹ Since January 1943, manufacturing firms reporting labor turn-over information have been assigned industry codes on the basis of current products. Most plants in the employment and pay-roll sample, comprising those which were in operation in 1939, are classified according to their major activity at that time, regardless of any subsequent change in major products. Labor turn-over data, beginning in January 1943, refer to wage and salary workers.

Employment information for wage and salary workers is available for manufacturing industry groups (table A-3); for individual industries the data refer to production workers only (table A-5).

² Preliminary figures.

³ Not available.

⁴ Less than 0.05.

NOTE: Explanatory notes outlining briefly the concepts, sources, size of the reporting sample, and methodology used in preparing the data presented in tables B-1 and B-2 are contained in the Bureau's monthly mimeographed release, "Labor Turn-Over," which is available upon request.

Earnings and Hours

TABLE C-1: Hours and Gross Earnings in Manufacturing and Nonmanufacturing Industries¹

MANUFACTURING

Miscellaneous including military	Sept. 1948	All manufacturing	Iron and steel and their products																
			Durable goods				Nondurable goods				Total: Iron and steel and their products			Blast furnaces, steel works, and rolling mills					
			Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings			
0.1																			
.1																			
.1																			
.2																			
.1																			
.3																			
(4)																			
33: Average.....		\$23.86	37.7	Cents	63.3	\$26.50	38.0	Cents	69.8	\$21.78	37.4	58.2	\$27.52	37.2	73.9	\$29.88	35.3	Cents	
34: January.....		26.64	39.0		68.3	30.48	40.7		74.9	22.75	37.3	61.0	31.07	40.4	76.9	33.60	38.7		
47: September....		50.47	40.4	124.9	54.06	40.6	133.1	46.80	40.2	116.5	56.21	40.3	139.6	58.96	39.0	151.3	56.86	41.7	137.1
October.....		51.05	40.6	125.8	54.69	40.9	133.7	47.29	40.2	117.5	56.61	40.5	139.7	58.56	39.0	150.2	56.66	41.9	136.5
November....		51.29	40.4	126.8	54.86	40.7	134.6	47.56	40.1	118.5	56.93	40.5	140.4	59.52	39.4	151.0	55.51	40.9	135.9
December....		52.69	41.2	127.8	56.48	41.7	135.4	48.72	40.8	119.6	58.13	41.2	141.2	60.01	39.5	151.9	58.16	42.5	136.8
(4)																			
35: January.....		82.07	40.5	128.5	55.46	40.9	135.5	48.45	40.0	121.0	57.43	40.6	141.4	60.58	39.5	153.3	57.31	41.6	137.9
February....		51.75	40.2	128.7	54.77	40.5	135.2	48.56	39.9	121.7	56.99	40.4	140.9	59.74	39.5	151.3	57.24	41.2	139.0
March.....		52.07	40.4	128.9	55.25	40.9	135.2	48.66	39.9	122.0	57.28	40.6	141.2	59.26	39.4	151.0	58.47	41.8	140.1
April.....		51.79	40.1	129.2	54.96	40.5	135.7	48.33	39.6	122.0	56.49	39.9	141.6	58.37	38.6	151.3	56.39	40.2	140.4
May.....		51.86	39.9	130.1	54.81	40.1	136.6	48.65	39.6	123.0	57.39	40.3	142.3	60.54	39.9	151.5	55.15	39.3	140.3
June.....		52.85	40.2	131.6	56.13	40.5	138.5	49.37	39.8	124.2	57.70	40.3	143.1	59.54	39.3	151.5	57.85	40.7	142.1
July.....		52.95	39.8	133.2	56.21	40.0	140.7	49.40	39.5	125.2	57.71	39.6	145.7	60.37	38.7	155.9	56.66	39.8	142.6
August....		54.07	40.1	134.9	58.23	40.7	143.1	49.78	39.5	126.2	60.66	40.4	150.3	65.10	39.6	164.2	58.08	40.4	143.8
September....		54.18	39.8	136.2	57.95	40.0	145.0	50.35	39.6	127.1	60.88	39.8	153.1	66.17	39.3	168.2	59.63	40.2	147.3
(4)																			
Iron and steel and their products—Continued																			
Malleable-iron castings			Steel castings			Cast-iron pipe and fittings			Tin cans and other tinware			Wirework			Cutlery and edge tools				
(4)																			
33: Average.....		\$24.16	36.0	Cents	67.1	\$27.97	36.9	Cents	75.9	\$21.33	36.4	58.1	\$23.61	38.8	61.1	\$25.96	38.1	Cents	
34: January.....		28.42	40.2		70.7	32.27	41.4		78.0	25.42	40.5	62.6	25.31	39.8	63.9	28.27	39.7		
47: September....		55.66	40.3	139.0	56.50	39.9	141.5	48.34	40.5	118.4	55.28	43.4	127.5	53.70	40.3	132.3	40.20	42.2	117.1
October....		57.73	41.2	141.1	58.15	40.7	142.9	49.60	41.4	119.8	53.74	42.5	127.0	54.35	41.0	132.6	49.57	42.1	117.5
November....		58.06	41.2	141.1	58.73	41.0	143.4	49.93	40.7	120.1	52.16	41.1	126.8	56.10	42.0	133.5	50.48	42.3	119.2
December....		59.18	41.8	141.4	60.05	41.6	144.3	50.98	42.2	120.6	53.92	42.5	126.5	57.83	42.6	136.6	50.26	42.0	119.7
(4)																			
35: January.....		59.03	41.5	142.0	59.48	41.1	144.6	49.67	40.4	122.5	51.45	40.7	126.3	56.36	41.8	134.7	49.91	41.8	119.2
February....		57.44	40.8	140.5	58.52	40.5	144.5	50.42	40.3	125.0	50.44	40.1	126.3	55.47	41.1	134.9	50.09	41.6	119.3
March.....		57.79	40.8	141.4	59.88	41.3	145.0	50.21	40.1	124.8	49.76	39.8	125.1	55.70	40.1	135.5	50.20	41.5	120.7
April.....		56.77	39.8	142.4	60.13	41.2	145.8	48.52	38.5	125.8	49.65	39.8	125.0	54.96	40.4	136.0	49.90	41.4	120.5
May.....		57.21	40.4	141.5	60.49	41.3	146.3	51.07	40.2	127.1	50.98	40.2	127.3	55.11	40.5	136.7	50.22	41.2	121.7
June.....		57.46	40.1	143.0	61.60	41.7	147.9	52.74	40.9	128.8	53.04	40.1	129.5	55.82	40.6	137.3	50.36	41.4	121.6
July.....		57.37	39.9	144.1	58.71	40.0	146.7	51.94	40.5	128.1	56.99	42.0	136.2	57.36	40.0	142.8	50.03	40.5	123.5
August....		59.44	40.2	147.0	61.79	41.4	149.2	52.84	40.6	130.2	57.04	41.6	136.8	58.11	40.3	144.3	51.77	41.6	124.5
September....		59.28	39.3	151.0	60.93	39.8	153.6	53.93	41.1	130.9	60.03	42.8	140.1	56.91	39.2	145.1	51.25	41.3	124.0
(4)																			
Iron and steel and their products—Continued																			
Tools (except edge tools, machine tools, files, and saws)			Hardware			Plumbers' supplies			Stoves, oil burners, and heating equip- ment, not else- where classified			Steam and hot- water heating ap- paratus and steam fittings			Stamped and enam- eled ware and gal- vanizing				
(4)																			
33: Average.....		\$24.49	39.7	Cents	61.8	\$23.13	38.9	Cents	59.3	\$25.80	38.2	67.6	\$25.25	38.1	66.6	\$26.19	37.6	Cents	
34: January.....		29.49	44.7		66.2	25.24	40.9		62.1	27.13	39.0	69.6	26.07	38.7	67.8	30.98	42.5		
47: September....		52.39	42.2	124.3	50.43	41.3	122.2	52.38	40.0	131.0	53.32	40.9	130.5	54.54	40.4	135.2	51.72	39.9	129.7
October....		52.47	42.1	124.8	51.22	41.7	122.8	54.65	40.7	134.3	55.15	41.6	132.6	55.46	41.1	135.0	52.40	40.4	129.8
November....		52.97	42.2	125.5	51.58	41.6	123.3	56.42	41.4	136.4	53.39	40.1	133.1	57.64	41.8	138.0	52.81	40.5	130.5
December....		54.44	43.0	126.6	52.55	42.2	124.5	57.00	41.6	137.0	56.22	42.0	133.9	58.66	42.2	138.9	54.72	41.5	132.0
(4)																			
35: January.....		54.24	42.6	127.3	53.29	42.4	125.6	55.61	40.8	136.5	54.24	40.3	134.5	54.87	40.3	136.3	53.65	40.7	131.9
February....		54.02	42.3	127.8	52.79	42.3	124.9	55.26	40.4	136.7	54.59	40.2	135.8	57.07	41.3	138.3	52.42	40.0	131.1
March.....		54.68	42.6	128.7	52.63	42.0	125.2	56.54	41.2	137.4	54.12	40.1	135.2	56.53	40.9	138.0	52.78	40.3	131.1
April.....		54.15	41.9	129.3	52.05	41.6	125.1	56.27	40.6	138.6	54.34	39.9	136.3	56.13	40.7	137.8	52.93	40.1	132.1
May.....		54.01	41.6	129.9	50.84	40.4	125.3	56.93	41.0	138.8	54.18	39.7	136.6	56.90	40.7	139.6	53.75	40.3	133.2
June.....		54.96	42.1	130.8	51.66	40.6	128.5	56.51	40.4	140.1	55.95	40.2	139.2	57.68	40.7	141.8	53.54	40.2	133.0
July.....		54.11	41.2	131.4	49.64	38.8	129.5	56.48	40.2	140.5	55.26	39.7	139.2	59.42	41.0	144.8	52.62	38.6	136.3
August....		56.53	42.2	134.2	52.32	40.6	130.8	58.12	40.7	142.9	57.04	40.5	141.1	59.68	40.7	146.6	54.80	39.8	137.8
September....		55.09	40.6	135.6	52.98	40.4	132.9	56.78	38.7	146.6	56.06	39.3	143.8	59.93	40.6	147.6	53.37	38.4	139.7

See footnotes at end of table.

TABLE C-1: Hours and Gross Earnings in Manufacturing and Nonmanufacturing Industries¹—Continued
MANUFACTURING—Continued

Year and month	Iron and steel and their products—Continued																		
	Fabricated structural and ornamental metalwork			Metal doors, sash, frames, molding, and trim			Bolts, nuts, washers, and rivets			Forgings, iron and steel			Screw-machine products and wood screws			Steel barrels, kegs, and drums			
	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	
1939: Average.....	\$27.95	38.5	Cents 72.7				\$26.04	37.7	Cents 69.0	\$29.45	38.4	Cents 76.7							
1941: January.....	31.01	41.8	74.3				29.58	41.9	70.6	36.75	45.0	81.8							
1947: September.....	55.87	41.6	134.4	\$55.75	42.0	132.8	53.08	40.2	131.7	62.38	40.9	152.6	\$58.91	41.9	128.5	\$55.08	40.7	129.4	
October.....	57.60	42.6	135.2	56.48	42.0	134.4	56.52	42.1	133.9	65.54	41.8	156.9	58.02	42.1	130.6	52.13	40.8	129.4	
November.....	57.31	42.0	136.8	57.11	42.7	123.9	56.98	41.3	135.3	65.00	41.4	157.2	54.55	41.6	131.1	53.81	40.8	129.4	
December.....	58.81	42.7	137.8	58.97	43.5	135.4	57.79	42.5	135.9	67.20	42.2	159.1	56.77	43.0	131.9	57.08	42.5	129.4	
1948: January.....	55.76	41.1	135.6	56.49	42.0	134.6	55.68	40.6	136.9	65.74	41.6	158.1	56.54	42.7	132.4	55.31	41.0	129.4	
February.....	55.31	40.9	135.3	55.88	41.7	134.2	57.38	42.0	136.4	65.51	41.4	158.3	56.62	42.8	132.4	51.35	38.2	129.4	
March.....	56.15	41.1	137.1	57.35	41.1	138.5	56.20	43.1	137.2	64.42	40.8	157.9	56.99	42.9	132.7	53.16	39.5	129.4	
April.....	55.77	40.8	136.5	57.97	41.2	139.2	58.44	42.5	137.5	63.10	40.0	157.7	56.30	42.4	132.7	53.49	39.2	129.4	
May.....	57.16	41.2	138.8	58.55	41.0	141.2	57.88	42.2	137.1	62.64	40.0	156.6	56.06	42.1	133.1	55.31	40.4	129.4	
June.....	57.84	41.2	139.5	61.49	42.7	143.9	58.76	42.3	138.6	64.74	40.7	158.0	55.65	41.9	132.8	55.41	40.5	129.4	
July.....	55.39	39.4	139.8	57.93	40.4	143.5	57.37	41.5	138.3	63.44	40.0	158.5	55.85	41.2	135.5	53.24	38.6	129.4	
August.....	59.92	41.1	144.7	61.71	41.9	147.3	60.97	42.3	144.0	66.59	40.4	164.7	56.52	41.3	137.2	58.39	39.9	129.4	
September.....	57.25	39.2	144.8	63.75	42.4	149.7	59.43	40.8	145.4	68.12	40.4	168.4	56.77	41.0	139.2	53.74	36.5	129.4	
	Iron and steel and their products—Continued			Electrical machinery															Machinery, except electrical
	Firearms			Total: Electrical machinery			Electrical equipment			Radios and phonographs			Communication equipment			Total: Machinery except electrical			
1939: Average.....	\$27.28	41.3	Cents 66.0	\$27.09	38.6	Cents 70.2	\$27.95	38.7	Cents 72.2	\$22.34	38.5	Cents 58.1	\$28.74	38.3	Cents 75.1	\$29.27	39.3	Cents 70.4	1939: Avg.
1941: January.....	35.09	48.6	72.2	31.84	42.4	75.1	33.18	43.4	76.5	24.08	38.2	65.2	32.47	41.4	78.4	34.36	44.0	70.4	1941: Jan.
1947: September.....	58.51	41.8	140.1	53.46	40.4	132.5	55.05	40.5	136.0	47.24	40.0	118.2	53.66	40.2	133.5	57.36	41.1	129.4	1947: Sep.
October.....	57.90	41.2	140.5	54.10	40.6	133.1	55.35	40.6	136.4	47.98	40.2	119.3	55.81	41.4	135.0	57.87	41.3	129.4	1947: Oct.
November.....	58.53	41.1	142.4	54.32	40.6	133.9	55.76	40.6	137.4	47.61	39.8	119.7	55.94	41.4	135.2	57.92	41.2	129.4	1947: Nov.
December.....	60.01	42.0	142.9	55.34	41.1	134.6	56.99	41.2	138.4	48.59	40.4	120.3	56.15	41.7	134.8	59.67	42.2	129.4	1947: Dec.
1948: January.....	59.88	41.8	143.4	54.82	40.5	135.2	56.77	40.8	139.1	47.56	39.6	120.2	54.64	40.5	135.1	59.13	41.8	129.4	1948: Jan.
February.....	60.80	42.1	144.8	54.50	40.4	134.8	56.11	40.6	138.2	47.00	39.2	120.0	55.83	41.1	135.9	58.65	41.4	129.4	1948: Feb.
March.....	62.33	42.7	146.0	54.41	40.3	135.0	56.23	40.5	138.8	47.00	39.2	119.9	54.78	40.5	135.5	59.12	41.6	129.4	1948: Mar.
April.....	61.16	41.8	146.3	53.86	39.9	135.0	55.70	40.2	138.7	47.01	39.1	120.1	53.49	39.6	135.3	59.30	41.4	129.4	1948: Apr.
May.....	61.42	41.9	146.6	53.70	39.6	135.7	55.41	39.9	139.0	46.97	38.8	121.1	53.59	39.3	136.4	59.33	41.2	129.4	1948: May
June.....	63.10	42.1	148.9	54.86	40.0	137.2	56.67	40.3	140.8	48.10	39.1	122.9	54.06	39.7	136.3	60.50	41.4	129.4	1948: Jun.
July.....	63.06	42.4	148.9	55.46	39.4	140.7	57.24	39.5	144.9	49.45	39.7	124.7	53.82	38.8	138.7	59.83	40.6	129.4	1948: Jul.
August.....	61.73	42.1	146.8	57.51	40.0	143.9	59.20	40.0	147.9	50.21	39.3	127.9	57.56	40.3	142.9	61.50	41.0	129.4	1948: Aug.
September.....	63.49	42.4	149.2	58.05	40.0	145.0	59.67	40.0	149.7	50.66	39.6	127.8	58.07	40.6	142.6	61.39	40.6	129.4	1948: Sep.
	Machinery, except electrical—Continued																		
	Machinery and machine-shop products			Engines and turbines			Tractors			Agricultural machinery, excluding tractors			Machine tools			Machine-tool accessories			
1939: Average.....	\$28.76	39.4	Cents 73.0	\$28.67	37.4	Cents 76.7	\$32.13	38.3	Cents 83.9	\$26.46	37.0	Cents 71.6	\$32.25	42.9	Cents 75.2	\$31.78	40.9	Cents 70.4	1939: Avg.
1941: January.....	34.00	43.7	77.7	36.80	44.1	82.7	36.03	41.5	86.8	29.02	39.5	75.7	40.15	50.4	79.7	37.90	50.0	70.4	1941: Jan.
1947: September.....	56.41	41.8	137.0	60.16	40.5	140.4	59.08	40.7	145.0	57.97	40.6	141.7	58.69	41.8	140.5	61.16	41.2	140.5	1947: Sep.
October.....	56.75	41.3	137.4	58.72	39.6	148.9	60.17	41.1	146.5	58.36	40.9	143.9	59.25	42.1	140.8	61.42	41.4	140.5	1947: Oct.
November.....	57.03	41.4	138.1	62.04	41.2	151.6	60.13	41.1	146.4	59.91	39.6	141.5	59.53	41.9	141.2	61.30	41.1	140.5	1947: Nov.
December.....	59.22	42.7	139.1	61.14	40.5	151.9	60.24	41.3	145.9	57.85	40.6	142.4	61.34	43.1	142.4	63.47	42.4	140.5	1947: Dec.
1948: January.....	58.33	42.0	138.9	62.79	41.3	152.9	60.10	41.1	146.2	57.84	40.4	143.3	59.64	42.0	142.0	63.58	42.2	140.5	1948: Jan.
February.....	58.11	41.8	139.2	62.66	41.6	152.7	59.40	40.6	146.4	57.80	40.4	143.2	60.54	42.3	143.2	63.59	42.2	140.5	1948: Feb.
March.....	58.29	41.8	139.5	63.31	41.6	152.5	59.43	40.6	146.4	59.55	41.0	145.1	60.58	42.3	143.3	62.30	41.8	140.5	1948: Mar.
April.....	58.57	41.6	140.8	62.47	41.0	153.0	60.08	39.4	152.6	58.87	40.5	145.5	60.29	42.0	143.7	63.50	42.0	140.5	1948: Apr.
May.....	59.05	41.6	141.8	63.46	41.2	154.3	54.12	35.5	152.6</										

TABLE C-1: Hours and Gross Earnings in Manufacturing and Nonmanufacturing Industries¹—Con.

MANUFACTURING—Continued

Year and month	Machinery, except electrical—Continued																	
	Textile machinery			Typewriters			Cash registers; adding, and calculating machines			Washing machines, wringers, and dryers, domestic			Sewing machines, domestic and industrial			Refrigerators and refrigeration equipment		
	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings
Cens:																		
Average.....	\$26.19	39.8	66.0	\$23.98	37.3	64.3	\$30.38	37.2	82.1									
January.....	30.13	44.6	67.7	26.40	39.1	67.5	34.78	41.4	84.6									
September.....	56.08	42.2	132.9	51.91	40.6	128.0	63.21	42.1	151.3	\$54.17	41.0	132.0	\$60.72	42.0	145.4	\$54.18	39.8	137.3
October.....	55.77	42.1	132.5	54.04	42.0	128.8	63.82	42.3	152.3	57.13	42.4	134.6	62.27	42.5	146.9	56.33	40.7	138.3
November.....	56.88	42.1	135.5	55.54	42.5	130.6	63.20	42.1	151.8	57.96	42.7	135.8	62.17	42.4	146.5	54.41	39.8	136.7
December.....	58.56	43.1	135.8	55.89	42.9	130.1	65.67	42.9	153.7	60.42	43.7	138.4	63.21	42.9	147.2	57.05	41.2	138.4
January.....	59.21	43.1	137.4	55.59	42.6	130.5	65.39	42.4	155.7	58.28	42.6	136.9	62.74	42.4	147.6	57.62	41.6	138.6
February.....	59.50	42.8	139.0	55.68	42.4	131.2	64.11	41.6	155.4	57.69	41.8	138.2	63.14	42.8	147.6	52.55	38.1	137.8
March.....	61.40	43.7	140.6	54.62	42.0	130.1	65.30	42.2	156.1	56.38	41.2	137.0	63.90	43.0	148.3	55.51	39.9	139.2
April.....	61.01	43.5	140.3	54.63	42.0	130.1	65.62	42.1	157.3	58.15	42.1	138.3	*61.01	42.3	*143.4	55.99	40.2	139.1
May.....	61.28	43.3	141.7	53.31	41.2	129.4	64.55	41.5	157.0	57.39	41.3	130.0	64.89	41.8	155.1	56.72	40.5	140.2
June.....	62.53	43.3	144.3	53.75	41.2	130.5	66.43	41.5	161.4	59.29	41.8	141.7	65.99	42.5	155.3	59.47	40.5	146.7
July.....	60.61	42.1	144.0	54.62	41.5	131.7	67.45	41.5	163.9	57.05	39.5	144.5	65.19	41.5	157.1	57.22	38.6	148.2
August.....	62.33	42.3	147.2	52.78	40.6	130.0	66.00	40.8	162.8	61.27	41.2	148.6	68.04	43.1	157.8	59.40	39.2	151.4
September.....	62.86	42.4	148.3	53.31	40.5	131.6	66.04	40.4	164.6	59.32	39.5	150.0	70.65	43.8	161.4	59.82	39.5	151.9
Transportation equipment, except automobiles																		
Total: Transportation equipment, except automobiles				Locomotives			Cars, electric- and steam-railroad			Aircraft and parts, excluding aircraft engines			Aircraft engines			Shipbuilding and boatbuilding		
Average.....	\$30.51	38.9	Cents	\$28.33	36.7	77.1	\$26.71	36.0	74.1	\$30.34	41.5	74.5	\$36.58	44.1	83.5	\$31.91	38.0	83.5
January.....	35.69	43.1	82.8	34.70	42.8	81.4	29.87	38.5	76.8	34.13	44.7	77.6	42.16	47.2	89.2	37.69	42.0	89.3
September.....	56.54	39.7	142.4	64.60	41.3	156.7	55.03	39.9	137.8	54.44	39.3	138.6	58.43	40.0	146.0	57.71	39.5	146.2
October.....	58.07	40.4	143.7	62.32	40.6	153.4	58.09	41.4	140.4	56.01	40.2	139.5	59.19	40.5	146.1	59.31	39.8	149.0
November.....	56.42	38.6	146.2	61.64	39.8	154.9	57.61	40.4	142.5	55.48	39.3	141.3	57.52	39.4	146.1	55.20	36.1	152.9
December.....	59.79	40.8	146.5	63.63	40.7	156.5	59.84	41.4	144.7	57.12	40.6	140.6	60.39	41.2	146.5	61.74	40.5	152.5
January.....	59.56	40.3	147.9	62.34	40.1	155.3	58.51	40.7	143.9	55.53	39.4	140.8	59.30	40.6	146.1	64.05	40.9	156.7
February.....	58.67	38.6	148.2	61.01	39.2	155.5	58.02	40.2	144.2	56.13	39.9	140.6	58.20	40.1	145.2	61.54	38.9	158.2
March.....	59.40	40.3	147.2	63.46	40.2	157.9	58.90	40.9	143.9	56.71	40.1	141.4	59.53	40.6	146.7	62.07	40.3	153.9
April.....	59.80	40.5	147.8	64.96	40.5	160.4	58.70	40.9	143.7	57.75	40.6	142.1	60.33	40.5	149.1	62.04	40.2	154.1
May.....	59.30	40.0	148.1	64.57	40.1	161.0	58.07	40.2	144.6	57.74	40.4	142.8	61.02	40.9	149.4	60.40	39.4	153.1
June.....	59.27	39.8	148.9	64.58	39.7	162.6	58.46	39.9	146.7	57.99	40.4	143.6	62.14	40.6	153.2	59.76	39.2	152.5
July.....	58.35	39.2	150.3	64.00	38.4	166.5	56.19	38.3	146.6	57.89	40.0	144.9	64.79	40.6	159.4	59.49	38.8	153.2
August.....	60.55	39.7	152.5	64.76	38.7	167.4	62.14	40.7	152.8	59.68	40.5	147.5	65.11	41.1	158.3	58.87	37.9	155.5
September.....	60.86	39.1	155.7	66.79	39.7	167.1	57.41	37.5	153.6	61.70	40.8	151.2	66.26	41.2	160.9	58.62	36.6	159.4
Transportation equipment, except automobiles—Con.																		
Automobiles			Total: Nonferrous metals and their products			Smelting and refining, primary, of nonferrous metals			Alloying and rolling and drawing of nonferrous metals, except aluminum			Clocks and watches						
Motorcycles, bicycles, and parts			Total: Nonferrous metals and their products			Smelting and refining, primary, of nonferrous metals			Alloying and rolling and drawing of nonferrous metals, except aluminum			Clocks and watches						
Cens:			Cents		Cents	Cents		Cents		Cents		Cents		Cents		Cents		Cents
Average.....			\$32.91	35.4	92.9	\$26.74	38.9	68.7	\$26.67	38.2	69.9	\$28.77	39.6	72.9	\$22.27	37.9	58.7	
January.....			37.69	38.9	96.9	30.47	41.4	73.6	29.21	38.7	75.5	35.96	44.0	81.8	23.90	38.9	61.4	
September.....	\$55.94	41.0	136.6	59.35	39.2	151.5	52.62	40.2	130.9	55.82	41.2	135.5	54.37	38.9	139.6	46.87	40.4	116.0
October.....	58.94	42.5	138.8	60.30	39.5	152.6	53.59	40.8	131.2	54.89	40.9	134.2	55.19	39.4	140.1	47.54	40.8	116.7
November.....	58.94	42.0	140.4	61.30	39.8	154.0	54.27	41.1	132.0	55.69	41.2	135.1	55.93	39.7	141.0	48.64	41.4	117.5
December.....	58.96	42.3	139.3	64.64	41.4	156.3	55.53	41.8	132.7	55.44	41.2	134.6	57.26	40.5	141.2	48.69	41.9	116.4
January.....	55.23	40.3	137.3	60.96	39.6	153.8	55.06	41.2	133.6	55.85	41.1	136.0	57.30	40.4	141.8	47.63	40.2	118.5
February.....	55.68	39.8	140.0	59.00	38.1	154.8	55.07	41.2	133.8	55.58	41.0	135.7	57.73	40.6	142.2	48.59	41.0	118.6
March.....	55.88	40.4	138.4	59.81	38.9	153.9	55.23	41.1	134.4	55.31	40.5	136.6	58.25	40.8	142.9	49.15	41.1	119.6
April.....	56.36	40.3	139.8	59.14	38.6	153.3	54.87	40.9	134.3	56.49	41.1	137.5	56.84	40.0	142.2	49.09	40.8	120.5
May.....	55.54	39.4	141.0	54.44	35.2	154.8	54.96	40.6	135.5	57.33	41.5	138.0	57.42	40.1	143.1	48.27	40.1	120.5
June.....	54.07	37.5	144.2	61.30	37.7	162.4	55.91	40.8	136.9	57.96	41.3							

TABLE C-1: Hours and Gross Earnings in Manufacturing and Nonmanufacturing Industries¹—Continued
MANUFACTURING—Continued

Year and month	Nonferrous metals and their products—Continued												Lumber and timber basic products					
	Jewelry (precious metals) and jewelers' findings			Silverware and plated ware			Lighting equipment			Aluminum manufacturers			Total: Lumber and timber basic products			Sawmills and logging camps		
	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings
1939: Average.....	\$26.36	39.4	66.0	\$26.03	40.7	64.3	\$25.73	37.1	69.3	\$27.49	39.3	69.9	\$19.06	39.0	48.9	\$18.29	38.4	48.4
1941: January.....	26.43	39.1	66.4	27.37	41.4	66.6	28.19	39.3	71.7	32.85	42.0	78.2	20.27	38.9	52.1	19.59	38.4	48.4
1947: September....	50.82	42.0	120.4	60.93	46.1	132.1	50.02	38.4	130.4	49.74	38.6	128.7	45.41	42.8	106.2	44.58	42.5	106.2
October.....	52.97	43.6	122.2	61.31	46.4	132.1	51.73	39.3	131.7	52.02	39.7	130.0	45.23	42.6	106.3	44.09	42.2	106.3
November.....	53.39	42.7	125.5	61.65	45.9	134.4	52.51	40.0	131.4	52.15	39.8	130.9	45.30	42.2	107.4	44.27	41.9	107.4
December.....	55.53	44.4	125.4	63.80	47.2	135.3	54.11	40.5	133.6	52.86	40.1	132.0	45.65	43.2	105.6	44.20	42.8	105.6
1948: January.....	51.69	41.9	123.7	62.54	46.3	135.4	53.92	39.8	135.6	53.35	40.2	132.9	44.49	42.4	105.0	42.94	42.0	105.0
February.....	52.98	42.6	124.9	62.52	46.1	135.6	52.86	39.3	134.5	52.75	39.6	133.0	45.01	41.7	108.0	43.41	41.1	108.0
March.....	52.17	42.2	123.7	63.81	46.5	137.4	53.22	39.2	135.9	52.05	39.4	132.2	45.32	42.3	107.1	43.86	42.0	107.1
April.....	51.31	41.2	124.6	62.09	45.7	136.0	52.90	38.8	136.4	52.53	39.7	132.3	45.59	42.1	108.3	43.99	41.6	108.3
May.....	50.59	39.8	127.1	62.00	45.5	136.3	51.75	37.7	137.3	52.83	39.7	132.2	47.39	42.5	111.5	*45.06	*41.3	111.5
June.....	52.10	40.9	127.4	62.24	45.5	136.7	53.19	37.5	141.9	52.13	39.1	133.3	48.43	42.8	113.1	47.37	42.6	113.1
July.....	49.30	39.8	124.0	58.55	43.7	134.0	56.31	38.6	146.0	52.79	37.3	141.4	48.14	41.9	114.9	47.29	41.7	114.9
August.....	51.07	40.3	126.7	61.34	45.0	136.3	55.88	38.4	145.4	55.16	38.9	141.9	50.69	43.1	117.6	49.87	42.9	117.6
September.....	51.68	40.3	129.1	65.07	46.6	139.0	57.16	39.3	146.3	55.19	38.7	142.8	49.32	41.8	118.1	48.36	41.5	118.1
	Lumber and timber basic products—Con.			Furniture and finished lumber products												Stone, clay, and glass products		
	Planing and plywood mills			Total: Furniture and finished lumber products			Furniture			Caskets and other morticians' goods			Wood preserving			Total: Stone, clay and glass products		
1939: Average.....	\$22.17	41.1	Cents 54.0	\$19.95	38.5	Cents 51.8	\$20.51	38.9	Cents 53.0							\$23.94	37.6	Cents 50.10
1941: January.....	22.51	40.5	55.4	20.90	38.7	54.0	21.42	39.0	55.2							25.02	37.4	50.10
1947: September....	48.94	43.8	111.8	45.38	41.5	109.3	46.24	41.4	111.7	\$47.06	41.6	112.8	\$42.41	42.2	100.5	49.57	40.4	122.94
October.....	50.12	44.3	113.2	46.53	42.1	110.5	47.76	42.3	113.0	47.00	41.1	113.9	42.10	41.5	101.7	50.38	40.8	122.94
November.....	49.60	43.2	114.7	46.32	41.8	110.8	48.07	42.3	113.7	47.35	40.9	115.0	39.98	39.7	100.7	50.47	40.5	122.94
December.....	51.61	44.8	115.1	47.72	42.7	111.7	49.10	42.9	114.5	49.01	42.2	115.7	40.50	39.8	101.7	51.00	41.0	122.94
1948: January.....	50.67	43.9	115.2	47.02	41.9	112.2	48.54	42.2	115.1	48.52	41.8	115.7	39.71	39.2	101.4	50.10	40.0	122.94
February.....	51.31	43.8	117.1	46.68	41.4	112.7	48.38	41.9	115.5	48.85	41.8	115.5	36.95	35.8	103.1	49.98	39.8	122.94
March.....	51.06	43.8	116.6	47.08	41.8	112.6	48.58	42.1	115.6	49.21	42.3	115.6	39.59	38.6	102.6	51.41	40.8	122.94
April.....	51.94	44.0	118.1	46.34	41.0	113.1	47.64	41.1	116.1	48.23	41.3	116.7	41.09	39.8	103.3	51.77	40.7	122.94
May.....	52.53	43.9	119.7	46.39	40.8	113.6	47.60	40.8	116.7	47.48	40.7	116.5	42.20	40.3	105.0	52.30	40.7	122.94
June.....	*52.61	43.8	121.3	46.54	40.7	114.5	47.57	40.6	117.4	47.61	40.6	117.2	42.45	40.4	105.0	52.45	40.6	122.94
July.....	51.91	42.7	122.0	46.30	40.3	114.9	46.95	40.0	117.6	47.37	40.0	117.7	43.51	41.1	105.9	51.50	39.4	122.94
August.....	53.88	43.9	123.1	47.74	41.0	116.3	48.47	40.7	118.9	48.65	40.6	119.4	42.90	41.1	104.9	54.00	40.9	122.94
September.....	53.37	43.0	124.8	48.21	40.8	118.1	49.28	40.7	120.9	48.89	40.6	120.1	43.84	40.6	108.4	53.87	40.1	122.94
	Stone, clay, and glass products—Continued																	
	Glass and glassware			Glass products made from purchased glass ²			Cement			Brick, tile, and terra cotta			Pottery and related products			Gypsum		
1939: Average.....	\$25.32	35.2	Cents 72.1				\$26.67	38.2	Cents 69.9	\$20.55	37.8	Cents 54.3	\$22.74	37.2	Cents 62.5			Cents 50.10
1941: January.....	28.02	36.3	77.2				26.82	37.9	70.9	21.74	36.9	58.7	22.92	36.4	63.5			Cents 50.10
1947: September....	51.57	39.2	131.7	\$42.91	40.1	107.1	52.68	41.8	126.1	46.51	40.9	113.3	46.14	38.5	120.7	54.68	45.0	122.94
October.....	52.27	39.4	132.8	44.41	41.1	108.1	52.32	42.0	124.5	47.37	41.3	114.3	48.18	39.6	122.1	56.70	45.9	122.94
November.....	53.05	39.2	135.4	43.87	40.4	108.5	52.19	41.9	124.5	46.81	40.5	114.8	48.25	39.4	122.7	56.35	45.3	122.94
December.....	53.07	39.5	134.4	46.16	42.3	109.2	51.94	42.0	123.7	47.46	41.2	114.6	48.55	39.2	123.8	56.53	45.6	122.94
1948: January.....	52.49	38.0	138.3	44.48	41.1	108.3	51.21	41.4	123.7	46.74	40.5	115.0	47.32	38.2	123.4	55.94	45.3	122.94
February.....	53.00	38.8	136.8	44.18	40.0	110.5	51.07	41.7	122.6	45.52	38.9	116.3	46.98	38.5	123.0	54.58	44.4	122.94
March.....	54.42	40.0	136.2	43.96	40.5	108.5	51.72	42.0	123.1	47.54	40.5	116.6	48.17	39.4	123.3	55.71	45.0	122.94
April.....	54.12	39.9	135.5	43.16	39.6	108.9	53.27	42.0	126.9	48.39	40.6	118.6	48.45	39.2	124.9	58.98	46.8	122.94
May.....	53.44	39.3	136.0	*45.53	40.4	*113.1	55.85	42.6	131.1	49.75	41.1	120.6	48.09	38.7	126.3	60.17	47.2	122.94
June.....	53.32	39.2	136.1	45.75	40.3	113.6	56.38	42.7	132.1	49.66	40.8	121.0	48.42	38.6	127.2	59.91	46.2	122.94
July.....	50.90	37.0	137.6	43.32	37.4	115.8	56.61	42.1	134.6	49.52	40.2	122.7	47.30	37.6	129.3	58.8		

TABLE C-1: Hours and Gross Earnings in Manufacturing and Nonmanufacturing Industries¹—Con.

MANUFACTURING—Continued

Year and month	Stone, clay, and glass products—Continued												Textile-mill products and other fiber manufactures							
	Lime			Marble, granite, slate, and other products			Abrasives			Asbestos products			Total: Textile-mill products and other fiber manufactures			Cotton manufactures, except smallwares				
	Avg. wkly. hours	Avg. wkly. earnings	Avg. hrly. earnings	Avg. wkly. earnings	Avg. hrly. earnings	Avg. wkly. hours	Avg. wkly. earnings	Avg. hrly. earnings	Avg. wkly. hours	Avg. wkly. earnings	Avg. hrly. earnings	Avg. wkly. hours	Avg. wkly. earnings	Avg. hrly. earnings	Avg. wkly. hours	Avg. wkly. earnings	Avg. hrly. earnings			
Cents				Cents			Cents			Cents			Cents			Cents				
38.4	6	Average.....		\$26.18	36.9	71.4				\$24.43	39.0	62.7	\$16.84	36.6	46.0	\$14.26	36.7	38.9		
38.4	6	Jan: January.....		24.20	34.6	70.8				27.26	41.3	66.0	18.01	36.9	48.8	15.60	37.2	41.9		
42.5	10	Sept: September.....	\$49.23	45.0	108.1	47.56	42.2	112.7	\$54.57	40.3	135.6	52.30	41.3	126.6	41.39	39.5	104.8	38.55	39.2	98.5
42.2	10	October.....	51.96	46.1	108.5	48.60	42.5	114.3	54.30	40.4	134.5	52.57	41.3	127.3	41.94	39.7	105.5	39.22	39.6	99.1
41.9	10	November.....	50.33	45.8	108.9	46.27	40.2	115.2	55.68	40.7	137.0	54.05	41.9	129.2	43.73	40.1	109.0	42.47	40.4	105.1
42.8	10	December.....	50.48	46.4	108.5	48.68	41.9	116.0	60.68	44.0	138.0	53.85	41.8	128.9	45.15	41.0	110.0	43.64	41.1	106.1
42.0	10	Jan: January.....	49.10	44.2	109.4	46.89	40.6	115.3	59.07	44.4	133.1	53.98	41.4	130.5	45.19	40.5	111.5	43.81	40.7	107.7
41.1	10	February.....	47.86	43.7	109.1	46.23	40.4	114.6	58.38	42.6	137.2	54.04	40.9	132.2	45.79	40.2	113.9	43.43	40.1	108.3
42.0	10	March.....	50.58	45.8	110.2	47.57	40.9	116.2	60.62	42.6	142.4	54.49	41.3	131.8	46.32	40.6	114.0	43.98	40.7	108.1
*41.3	10	April.....	52.08	46.3	112.7	47.97	40.9	116.0	59.02	41.5	142.3	55.11	41.2	133.8	45.46	39.9	113.8	43.08	40.1	107.6
42.6	11	May.....	52.41	46.1	113.6	49.44	41.3	119.3	61.04	41.9	145.7	55.45	41.3	134.0	45.22	39.6	114.2	42.64	39.6	107.8
41.7	11	June.....	53.32	45.9	115.3	49.21	40.9	119.8	61.39	42.2	145.6	56.17	41.7	134.8	45.29	39.5	114.7	42.00	39.1	107.5
42.9	11	July.....	52.46	44.4	116.9	48.27	39.8	120.9	58.53	41.3	142.3	57.18	41.7	137.3	44.15	38.6	114.5	40.63	38.0	107.0
41.5	11	August.....	54.96	46.1	118.8	49.77	40.8	121.4	60.17	41.6	145.4	57.52	41.4	139.1	45.07	38.5	117.0	41.61	37.7	110.6
41.5	11	September.....	54.83	45.3	121.2	49.49	40.5	121.9	62.09	42.0	148.5	57.56	41.2	139.1	45.12	38.0	118.8	41.69	37.1	112.5
Textile-mill products and other fiber manufactures—Continued																				
Cotton smallwares	Cotton smallwares			Silk and rayon goods			Woolen and worsted manufactures, except dyeing and finishing			Hosiery			Knitted cloth			Knitted outerwear and knitted gloves				
	Cents			Cents			Cents			Cents			Cents			Cents				
37.6	6	Average.....	\$18.22	39.0	47.4	\$15.78	36.5	42.9	\$19.21	36.4	52.8	\$18.98	35.6	53.6	\$18.15	38.4	46.8	\$17.14	37.0	46.1
37.4	6	Jan: January.....	19.74	39.3	50.3	16.53	35.7	46.1	21.78	37.9	57.6	18.51	33.8	55.0	19.90	37.9	50.3	17.65	35.8	48.9
40.4	12	Sept: September.....	40.67	39.7	102.4	43.23	40.9	105.7	46.99	40.2	116.9	39.48	37.7	104.9	41.71	40.5	102.7	35.96	37.5	95.1
40.8	12	October.....	40.49	39.1	103.5	43.57	41.0	106.2	46.70	39.7	117.8	41.00	38.3	106.9	42.21	41.1	102.1	38.01	38.8	96.9
40.5	12	November.....	40.13	38.7	103.6	44.84	41.2	108.8	46.95	39.6	118.8	42.11	38.7	108.7	42.53	40.8	103.5	38.30	38.7	98.0
41.0	12	December.....	42.35	40.5	104.5	46.48	42.3	110.0	49.12	41.2	119.2	42.95	39.1	100.8	44.18	41.9	104.5	38.02	38.5	97.8
40.0	12	Jan: January.....	43.15	40.3	107.1	47.55	41.9	113.7	48.70	40.8	119.5	41.76	37.9	110.3	44.65	42.1	106.2	37.94	37.7	99.2
39.8	12	February.....	43.23	40.4	107.2	47.92	41.8	114.7	52.82	40.8	130.3	41.72	37.6	110.8	45.23	41.9	107.9	39.18	38.7	100.1
40.8	12	March.....	43.31	40.2	108.0	48.53	42.2	115.1	53.49	40.7	131.3	42.80	38.6	110.8	45.84	41.9	109.4	39.08	38.6	100.4
40.7	12	April.....	43.03	39.6	108.7	48.31	41.8	115.6	52.33	39.9	131.1	41.61	37.4	111.2	44.39	41.4	107.2	38.73	38.4	100.7
40.7	12	May.....	42.72	39.3	108.9	48.38	41.8	115.7	52.61	40.1	131.4	41.14	36.7	112.0	42.79	39.7	107.8	39.00	38.5	101.2
40.6	12	June.....	43.98	39.8	110.6	48.47	41.8	115.9	53.10	40.3	132.0	42.01	36.6	114.6	43.94	40.7	107.9	38.84	38.3	100.4
39.4	12	July.....	43.48	39.3	110.7	47.69	41.6	114.7	52.31	39.5	132.7	41.52	36.1	114.8	44.21	40.5	109.1	37.28	37.2	98.7
40.9	12	August.....	43.40	38.9	111.5	48.85	41.3	118.2	52.13	39.6	131.7	42.98	36.8	116.7	44.84	40.7	109.7	37.89	37.3	100.0
40.1	12	September.....	44.09	39.0	113.0	49.62	41.2	120.6	51.19	38.8	132.3	43.66	36.3	120.2	43.59	39.1	111.6	38.34	37.5	101.4
Textile-mill products and other fiber manufactures—Continued																				
Knitted underwear	Dyeing and finishing textiles, including woolen and worsted			Carpets and rugs, wool			Hats, fur-felt			Jutegoods, except felts			Cordage and twine							
	Cents			Cents			Cents			Cents			Cents			Cents				
45.0	12	Sept: September.....	36.30	39.5	91.8	47.89	41.9	114.2	52.38	41.0	127.9	47.44	35.9	133.4	\$37.51	41.4	90.6	\$40.00	38.8	103.0
45.9	12	October.....	36.50	39.3	93.0	47.16	41.5	113.6	53.53	41.4	129.5	48.33	37.0	131.1	37.27	41.1	90.6	41.70	40.1	104.1
45.3	12	November.....	37.41	39.5	94.7	48.16	41.2	116.7	53.99	41.6	130.1	47.10	36.2	130.3	37.60	41.5	90.6	42.55	40.4	105.3
45.6	12	December.....	38.17	40.2	95.1	50.25	42.7	117.5	54.91	42.2	130.6	51.82	39.1	132.1	38.21	41.2	92.7	44.13	41.3	106.8
45.3	12	Jan: January.....	37.77	39.4	95.9	51.04	42.3	120.4	55.23	41.9	132.2	50.17	37.8	132.8	41.75	40.8	102.4	44.63	41.3	108.1
44.4	12	February.....	37.76	38.9	96.9	51.80	42.2	122.7	55.35	42.0	131.9	51.79	38.7	132.8	42.28	40.1	105.3	44.44	40.8	109.1
45.0	12	March.....	38.89	39.5	98.1	51.85	42.3	122.7	55.79	42.1	132.7	50.36	37.2	134.8	42.44	40.0	106.0	43.65	40.6	107.9
46.8	12	April.....	38.72	39.1	98.8	51.44	41.8	12												

TABLE C-1: Hours and Gross Earnings in Manufacturing and Nonmanufacturing Industries¹—Continued
MANUFACTURING—Continued

Year and month	Apparel and other finished textile products																	
	Total: Apparel and other finished textile products			Men's clothing, not elsewhere classified			Shirts, collars, and nightwear			Underwear and neckwear, men's			Work shirts			Women's clothing, not elsewhere classified		
	Avg. wky. earnings	Avg. wky. hours	Avg. hrly. earnings	Avg. wky. earnings	Avg. wky. hours	Avg. hrly. earnings	Avg. wky. earnings	Avg. wky. hours	Avg. hrly. earnings	Avg. wky. earnings	Avg. wky. hours	Avg. hrly. earnings	Avg. wky. earnings	Avg. wky. hours	Avg. hrly. earnings	Avg. wky. earnings	Avg. wky. hours	Avg. hrly. earnings
1939: Average.....	\$18.17	34.5	52.7	\$19.32	33.2	58.1	\$13.75	34.6	39.8	\$14.18	35.4	40.1	\$11.03	35.8	30.9	\$19.20	33.9	Cents
1941: January.....	18.76	33.5	56.0	20.40	33.4	60.7	14.22	33.0	43.1	14.85	33.6	44.2	12.33	33.6	36.7	19.47	33.2	58
1947: September.....	37.64	36.0	104.6	41.06	36.8	110.6	32.38	36.9	87.8	33.05	35.5	93.2	25.59	34.6	74.0	45.78	35.0	107; Se
October.....	38.78	36.9	105.1	42.78	37.9	112.0	33.42	37.8	88.5	35.00	36.9	94.9	25.15	33.7	74.5	46.91	35.8	127
November.....	37.09	36.4	101.9	42.24	37.5	111.6	33.75	38.0	88.9	35.09	36.5	96.1	24.90	34.1	72.8	43.82	35.3	121
December.....	39.00	37.1	105.2	43.11	37.7	113.6	35.12	38.1	91.8	35.56	37.3	95.3	24.32	34.1	71.2	46.76	36.2	127
1948: January.....	40.00	36.6	109.4	44.11	37.1	117.8	34.45	36.9	92.9	35.03	36.4	95.7	23.73	32.7	72.5	48.52	36.0	132
February.....	40.23	36.7	109.8	44.06	37.1	117.6	34.20	36.8	92.8	34.78	35.5	97.4	25.60	35.6	72.1	49.09	36.1	132
March.....	40.09	36.7	109.2	44.73	37.4	118.8	35.02	37.4	93.4	35.77	36.3	98.4	26.50	36.9	71.8	48.10	36.1	131
April.....	37.61	36.2	104.0	44.31	37.3	117.3	34.39	36.9	92.8	34.35	36.0	95.4	26.85	36.8	73.0	43.20	35.1	120
May.....	37.24	35.8	104.0	43.50	36.8	117.1	33.83	36.3	92.7	34.80	36.8	94.6	27.22	36.5	74.4	43.27	35.1	120
June.....	37.61	35.6	105.5	43.19	36.4	116.9	33.00	35.5	92.5	34.00	36.0	95.0	27.21	37.1	73.2	43.94	35.0	120
July.....	38.74	35.8	108.1	43.03	36.8	116.0	33.14	36.2	92.4	34.54	36.6	95.0	26.67	36.2	73.5	46.09	34.9	130
August.....	40.28	36.5	110.5	44.04	36.8	118.2	32.97	36.3	92.1	35.30	37.0	96.0	27.32	36.4	73.9	48.63	35.9	132
September.....	40.39	36.2	111.7	43.66	36.8	118.4	33.39	36.4	93.2	35.74	36.6	98.2	28.13	36.6	76.3	48.65	35.6	132
Apparel and other finished textile products—Continued																		
Corsets and allied garments	Corsets and allied garments			Millinery			Handkerchiefs			Curtains, draperies, and bedspreads			Housefurnishings, other than curtains, etc.			Textile bags		
	Avg. wky. earnings	Avg. wky. hours	Avg. hrly. earnings	Avg. wky. earnings	Avg. wky. hours	Avg. hrly. earnings	Avg. wky. earnings	Avg. wky. hours	Avg. hrly. earnings	Avg. wky. earnings	Avg. wky. hours	Avg. hrly. earnings	Avg. wky. earnings	Avg. wky. hours	Avg. hrly. earnings	Avg. wky. earnings	Avg. wky. hours	Avg. hrly. earnings
	\$17.18	37.5	46.6	\$22.19	33.8	63.6	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	Cents
1939: Average.....	\$17.18	37.5	46.6	\$22.19	33.8	63.6	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
1941: January.....	17.24	35.6	48.2	22.31	30.5	64.8	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
1947: September.....	35.75	37.5	95.4	49.74	35.8	134.0	\$31.85	36.7	86.7	\$30.64	37.3	83.0	\$38.33	38.2	99.6	\$35.86	38.1	94
October.....	36.76	38.5	95.6	53.20	38.2	133.7	32.57	37.5	86.8	31.55	37.5	84.4	38.72	38.3	100.4	36.76	38.9	94
November.....	36.80	38.6	95.5	39.14	31.3	121.3	33.31	37.7	88.4	31.26	37.2	83.9	38.03	38.3	98.3	37.25	38.9	94
December.....	36.89	39.0	94.8	46.03	35.0	125.6	32.55	37.0	88.1	31.28	37.1	84.3	41.34	40.5	101.2	37.60	39.5	94
1948: January.....	37.37	38.0	98.5	53.14	37.3	136.5	30.46	34.4	88.4	31.44	36.8	85.6	38.54	38.2	99.9	37.20	38.9	94
February.....	37.07	37.9	97.9	57.84	39.3	141.5	32.66	36.4	89.7	30.69	35.9	85.4	36.83	37.7	96.5	36.23	38.0	94
March.....	38.14	38.5	99.3	52.77	36.9	139.4	34.21	37.1	92.2	31.40	35.4	88.2	38.29	38.1	100.0	35.80	37.1	94
April.....	37.30	37.8	99.1	49.95	36.0	135.3	33.09	36.1	91.7	30.17	33.1	89.1	38.46	38.2	100.1	36.35	37.2	94
May.....	35.85	35.8	100.3	42.82	31.5	133.3	31.66	34.8	90.9	30.41	32.9	91.2	37.52	37.2	99.8	37.94	38.4	94
June.....	36.58	36.2	101.3	45.29	32.7	135.2	31.40	34.3	91.7	30.50	33.6	89.8	40.19	39.1	101.9	38.10	38.3	94
July.....	36.10	36.0	100.3	50.99	34.8	141.4	30.62	33.8	90.7	30.33	34.2	90.5	39.01	38.2	101.0	38.93	38.9	100
August.....	36.37	36.3	100.4	54.48	36.8	145.2	33.07	35.8	92.0	32.24	35.5	91.4	39.80	38.7	101.2	39.68	39.2	101
September.....	37.04	36.8	100.6	55.87	36.8	147.0	34.34	37.2	92.4	30.03	32.0	94.0	38.79	37.0	102.5	41.34	39.7	104
Leather and leather products																		
Total: Leather and leather products	Total: Leather and leather products			Leather			Boot and shoe cut stock and findings			Boots and shoes			Leather gloves and mittens			Trunks and suitcases		
	Avg. wky. earnings	Avg. wky. hours	Avg. hrly. earnings	Avg. wky. earnings	Avg. wky. hours	Avg. hrly. earnings	Avg. wky. earnings	Avg. wky. hours	Avg. hrly. earnings	Avg. wky. earnings	Avg. wky. hours	Avg. hrly. earnings	Avg. wky. earnings	Avg. wky. hours	Avg. hrly. earnings	Avg. wky. earnings	Avg. wky. hours	Avg. hrly. earnings
	\$19.13	36.2	52.8	\$24.43	38.7	63.4	-----	-----	-----	\$17.83	35.7	50.3	-----	-----	-----	-----	-----	Cents
1939: Average.....	\$19.13	36.2	52.8	\$24.43	38.7	63.4	-----	-----	-----	19.58	37.0	53.0	-----	-----	-----	-----	-----	-----
1941: January.....	20.66	37.3	55.4	25.27	38.3	66.2	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
1947: September.....	41.89	39.1	107.2	52.66	41.0	128.3	\$40.14	39.2	103.2	40.12	38.8	103.5	\$33.45	36.3	92.7	\$43.07	39.5	104
October.....	42.18	39.0	108.2	52.52	40.7	128.7	39.19	38.3	103.7	40.41	38.7	104.6	34.43	36.4	94.5	46.15	40.9	111
November.....	41.93	38.3	109.5	52.82	40.6	129.7	38.92	37.2	106.0	39.98	37.8	105.9	33.86	36.3	93.4	47.61	42.2	112
December.....	42.67	39.1	109.2	53.65	41.3	130.0	41.36	39.3	106.3	40.87	38.7	105.6	33.91	36.3	93.1	45.53	40.9	110
1948: January.....	42.63	39.0	109.5	53.06	40.8	129.9	41.36	38.9	107.5	41.09	38.8	105.9	33.75	35.7	94.7	42.33	38.4	110
February.....	42.99	39.0	110.2	53.38	40.5	131.7	41.23	38.4	108.0	41.35	38.8	106.5	33.67	36.0	94.1	45.61	40.6	112
March.....	41.87	37.8	110.6	51.91	39.4	131.5	40.55	37.6	108.6	40.21	37.5	107.1	33.82	36.0	94.0	45.83	40.6	113
April.....	40.34	36.2	111.6	51.50	39.1	131.8	39.90	36.5	110.7	38.09	35.3	108.0	33.18	35.4	93.8	45.35	40.1	113
May.....	39.65	35.5	111.8	52.38	39.4	133.0	39.72	36.3	110.5	36.79	34.3	107.4	34.77	35.2				

TABLE C-1: Hours and Gross Earnings in Manufacturing and Nonmanufacturing Industries¹—Con.

MANUFACTURING—Continued

Year and month	Food																	
	Total: Food			Slaughtering and meat packing			Butter			Condensed and evaporated milk			Ice cream			Flour		
	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings
1948: Average.....	\$24.43	40.3	60.7	\$27.85	40.6	68.6	\$22.60	46.7	48.4	\$29.24	46.2	62.6	\$25.80	42.3	60.8			
1948: January.....	24.69	39.0	63.3	26.84	39.8	68.1	22.84	44.6	50.9	29.41	44.2	65.3	25.27	41.0	60.8			
1948: September.....	49.04	43.4	112.9	55.31	43.4	127.6	45.65	47.4	96.1	\$49.06	46.9	105.9	50.12	45.7	105.9	59.91	49.9	120.1
October.....	49.61	42.8	115.9	54.98	43.2	127.3	45.58	46.3	98.1	49.24	46.5	106.8	49.86	45.8	106.4	59.01	49.0	120.3
November.....	49.90	42.5	117.3	61.31	46.9	130.5	46.05	46.1	48.54	45.7	106.2	49.40	44.3	107.2	59.15	48.6	121.8	
December.....	50.93	43.3	117.8	61.57	47.7	129.1	46.98	46.5	100.4	49.32	45.9	107.4	49.87	44.8	107.3	56.45	47.6	118.7
1949: January.....	49.44	42.0	117.7	57.12	44.8	127.5	45.92	45.9	99.5	50.20	45.5	110.3	50.50	45.3	107.9	54.43	46.4	117.5
February.....	49.18	41.6	118.1	51.88	40.7	127.7	47.28	46.3	101.1	51.68	45.9	112.5	51.12	45.0	109.3	54.56	45.9	118.9
March.....	49.36	41.6	118.7	56.62	43.6	130.1	45.92	45.8	101.1	52.28	46.4	112.6	51.44	45.4	109.5	50.99	43.7	116.7
April.....	50.95	42.4	120.1	68.51	48.1	142.5	47.16	45.6	103.2	53.51	46.7	114.7	50.86	45.3	108.7	53.07	45.3	117.3
May.....	51.26	42.5	120.7	67.66	46.7	142.4	47.52	45.9	103.3	55.36	47.5	116.5	51.11	45.0	108.6	55.12	46.1	119.6
June.....	52.09	42.8	121.7	61.24	44.1	138.3	48.42	46.3	104.3	56.66	48.5	116.8	52.22	45.8	110.3	57.48	47.8	120.4
July.....	51.77	42.6	121.5	58.75	42.9	136.8	49.66	46.9	106.3	56.42	47.6	118.6	53.58	46.2	112.5	60.05	48.4	124.1
August.....	49.73	41.0	121.3	56.61	41.2	135.0	49.56	46.7	107.0	56.07	47.7	117.4	52.81	44.7	114.7	61.14	48.1	127.1
September.....	51.64	42.5	121.4	57.73	42.4	135.7	48.92	46.0	108.2	55.99	47.0	119.1	54.45	45.3	117.2	60.77	46.3	131.5
Food—Continued																		
Cereal preparations			Baking			Sugar refining, cane			Sugar, beet			Confectionery			Beverages, non-alcoholic			
1948: Average.....			Cents			Cents			Cents			Cents						Cents
1948: January.....			\$25.70			62.1			\$23.91			63.6			\$24.68			55.6
1948: September.....	\$51.28	40.5	126.5	46.14	41.9	110.4	50.87	44.0	115.6	51.55	40.8	126.3	41.20	40.4	102.1	47.91	46.0	104.9
October.....	50.54	39.7	127.3	46.85	41.9	111.5	53.03	45.3	116.8	50.59	44.8	113.0	42.24	41.1	102.9	45.85	44.3	103.9
November.....	52.05	40.3	129.1	46.26	41.6	111.5	56.39	46.0	122.4	56.47	48.2	117.2	42.24	40.8	103.6	44.60	43.3	103.2
December.....	54.13	40.8	132.8	47.43	42.3	111.9	48.24	41.2	117.1	53.87	46.1	116.8	42.96	41.5	103.5	45.22	43.7	103.2
1949: January.....	54.10	40.5	133.8	47.03	41.6	113.1	45.66	38.0	120.1	50.45	39.0	129.3	40.82	39.6	103.4	45.05	43.0	105.5
February.....	55.58	40.6	136.9	49.30	43.6	113.2	44.66	37.9	117.7	55.30	42.4	130.5	40.45	38.9	104.5	44.99	42.9	104.8
March.....	52.46	38.7	135.6	47.38	41.9	113.1	49.30	41.0	120.2	50.11	38.7	129.6	40.48	39.1	105.0	44.93	43.0	104.4
April.....	54.50	39.8	137.0	48.00	42.1	113.8	52.57	43.2	121.7	50.19	38.4	130.2	40.83	38.6	106.0	45.46	43.7	104.1
May.....	55.64	40.4	137.7	49.08	42.7	114.8	51.08	41.9	122.0	50.27	37.5	133.9	39.21	37.5	103.6	45.75	43.9	104.1
June.....	58.00	41.5	139.8	50.03	42.9	116.5	53.14	44.0	120.7	50.20	38.5	130.3	42.15	39.5	106.9	47.20	45.0	105.2
July.....	57.92	41.7	139.1	50.01	42.7	116.8	57.73	45.9	125.8	50.73	38.4	132.1	42.32	39.3	107.8	49.39	46.1	107.6
August.....	53.66	39.0	137.8	49.77	42.5	116.9	57.52	45.6	126.1	49.20	37.0	133.0	43.47	40.2	108.8	45.18	42.5	105.9
September.....	52.61	37.6	140.1	50.78	42.8	118.6	54.97	43.5	125.5	55.18	40.4	136.6	44.73	41.0	109.8	46.94	43.6	107.5
Food—Continued																		
Tobacco manufactures																		
Malt liquors			Canning and preserving			Total: Tobacco manufactures			Cigarettes			Cigars			Tobacco (chewing and smoking) and snuff			
1948: Average.....	\$35.01	38.3	Cents	91.6	\$16.77	Cents	37.0	46.4	\$16.84	35.4	47.6	\$20.88	37.2	56.1	\$14.59	34.7	41.9	\$17.53
1948: January.....	34.57	36.4		95.2	16.67		33.0	51.0	17.89	35.7	50.1	22.38	37.3	60.0	15.13	35.0	43.2	18.60
1948: September.....	60.54	45.2	153.9	43.00	42.8	102.5	37.33	39.2	95.2	43.36	40.7	106.6	32.42	37.7	85.7	38.39	41.2	93.3
October.....	66.10	43.5	151.7	44.75	40.9	110.0	37.90	39.7	95.4	43.92	41.3	106.3	33.21	38.3	86.3	37.78	40.6	93.1
November.....	64.03	42.1	152.3	37.94	35.9	106.2	37.67	39.4	95.6	43.15	40.6	106.3	33.60	38.6	86.8	36.10	38.5	93.9
December.....	63.54	42.1	151.1	41.14	37.7	109.3	39.16	39.9	98.3	45.45	40.6	111.9	34.24	39.3	86.8	37.16	39.1	95.0
1949: January.....	61.03	40.4	151.0	41.10	37.3	110.2	37.97	38.6	98.4	44.74	39.4	113.5	32.64	38.1	86.0	35.38	37.1	95.5
February.....	62.25	40.9	152.0	42.73	38.4	111.8	35.04	36.2	96.8	37.93	33.9	112.0	32.59	37.9	85.7	35.89	37.2	96.5
March.....	62.57	41.2	151.6	40.77	36.5	112.0	36.52	37.7	96.8	42.99	38.2	112.4	32.12	37.5	85.2	35.78	36.9	97.1
April.....	65.24	42.5	153.2	41.63	37.0	113.0	37.19	38.2	97.3	44.35	39.6	111.9	32.13	37.4	85.7	36.32	37.1	97.9
May.....	65.31	42.5	153.7	41.35	36.8	112.5	37.12	37.7	98.4	44.32	38.9	113.9	31.80	36.9	85.8	36.91	37.3	99.1
June.....	67.74	42.9	157.8	41.16	38.0	109.0	37.86	37.8	100.3	45.84	39.1	117.2	31.73	36.8	86.3	37.93	37.6	100.9
July.....	71.35	44.1	161.0	41.78	39.0	108.3	38.51	38.0	101.4	46.59	39.8	117.1	32.24	36.7	87.7	37.59	37.1	101.5
August.....	69.14	42.9																

TABLE C-1: Hours and Gross Earnings in Manufacturing and Nonmanufacturing Industries¹—Continued
MANUFACTURING—Continued

Year and month	Paper and allied products															Printing, publishing, and allied industries		
	Total: Paper and allied products			Paper and pulp			Envelopes			Paper bags			Paper boxes			Total: Printing, publishing, and allied industries		
	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings
1939: Average.....	\$23.72	40.1	59.2	\$24.92	40.3	62.0										\$21.78	40.2	54.7
1941: January.....	25.16	40.0	62.9	27.02	40.8	66.2										22.26	38.8	57.6
1947: September.....	51.99	42.9	121.0	57.14	44.5	128.3	\$47.02	42.2	112.5	\$42.05	38.2	110.2	46.53	41.6	112.2	61.61	40.2	132.42
October.....	52.22	43.0	121.5	57.10	44.4	128.7	46.97	42.1	112.8	43.67	39.3	111.3	47.37	42.1	112.7	61.62	40.0	132.40
November.....	52.80	43.2	122.2	57.40	44.4	129.2	46.52	41.9	112.0	43.17	39.0	110.6	48.66	42.7	114.3	62.30	40.0	132.30
December.....	53.69	43.8	122.6	58.21	44.9	129.5	47.35	42.2	112.2	45.29	40.7	111.3	49.44	43.3	114.4	63.37	40.4	132.37
1948: January.....	53.20	43.1	123.5	57.75	44.4	130.1	46.50	41.4	113.9	45.23	40.8	111.2	48.35	42.0	115.5	62.41	39.5	132.41
February.....	53.61	43.1	124.5	58.41	44.5	131.0	46.68	41.3	114.6	44.34	39.5	112.0	48.75	41.9	116.7	62.72	39.1	132.41
March.....	53.82	43.1	124.9	58.50	44.5	131.3	46.30	41.1	114.4	45.69	40.7	112.1	49.14	41.8	117.7	63.97	39.5	132.41
April.....	53.36	42.7	125.0	58.02	44.1	131.3	46.26	40.8	114.9	45.14	40.5	111.3	48.32	41.0	118.0	64.62	39.2	132.41
May.....	54.28	42.8	126.9	59.47	44.6	133.4	46.34	40.8	115.0	44.93	39.8	112.6	48.64	40.7	119.9	65.06	39.1	132.41
June.....	55.34	42.8	129.2	60.40	44.1	136.8	47.02	41.3	115.8	46.29	40.8	113.0	50.48	41.6	121.6	65.48	39.1	132.41
July.....	55.97	42.5	131.7	61.49	43.9	140.0	45.87	40.6	114.8	48.61	41.6	116.7	49.87	40.7	122.9	65.08	38.9	132.41
August.....	56.98	43.2	132.0	62.32	44.4	140.2	47.86	41.4	118.3	49.32	41.3	110.3	51.50	42.0	123.3	65.89	39.1	132.41
September.....	57.02	42.7	133.5	62.10	43.7	142.2	47.85	41.5	119.0	48.64	41.1	119.0	52.03	41.9	124.3	67.31	39.3	132.41
Printing, publishing, and allied industries—Continued																		
Newspapers and periodicals	Newspapers and periodicals			Printing; book and job			Lithographing			Total: Chemicals and allied products			Paints, varnishes, and colors			Drugs, medicines, and insecticides		
1939: Average.....	\$37.58	36.1	Cents	\$30.30	38.3	Cents										\$25.59	39.5	64.9
1941: January.....	38.15	36.4	100.4	31.64	39.6	80.4										27.53	39.9	69.0
1947: September.....	60.40	39.0	175.3	58.32	40.8	143.6	\$60.51	41.2	146.7	51.81	41.0	126.3	53.55	41.8	128.4	46.43	39.5	117.43
October.....	69.18	38.7	175.8	58.63	40.7	145.1	60.16	41.1	146.2	52.67	41.4	127.3	53.93	41.9	129.0	47.90	40.4	118.41
November.....	69.78	38.6	177.6	59.35	40.7	146.9	62.19	42.4	146.7	53.15	41.3	128.7	55.06	41.9	131.6	47.35	40.0	118.41
December.....	71.45	39.1	179.1	60.22	41.1	147.9	62.91	42.3	148.6	53.73	41.5	129.3	55.11	42.0	131.4	47.90	40.4	118.41
1948: January.....	68.96	37.8	179.7	60.23	40.7	149.3	61.03	40.4	151.1	54.31	41.4	131.1	55.34	42.0	132.1	48.31	40.4	119.48
February.....	70.36	38.3	181.2	60.13	39.8	152.8	60.04	39.8	150.9	54.12	41.1	131.5	55.73	41.8	133.4	48.42	40.2	120.48
March.....	71.32	38.4	184.3	60.96	40.3	152.8	62.92	40.3	156.0	54.15	41.2	131.5	55.71	41.7	133.8	48.44	40.2	120.48
April.....	72.79	38.5	187.0	61.26	39.9	155.1	61.78	39.5	156.5	54.38	41.0	132.7	55.54	41.5	134.4	48.36	39.8	121.48
May.....	73.04	38.4	187.7	61.92	39.8	157.0	63.24	39.5	160.1	55.24	41.0	134.7	57.22	42.2	135.8	48.91	39.4	121.48
June.....	73.20	38.0	189.6	62.25	39.7	157.9	64.60	40.0	161.6	56.64	41.4	136.9	57.84	42.4	136.5	49.56	39.5	121.48
July.....	73.39	37.8	189.4	62.06	39.7	157.6	62.45	38.6	161.8	57.21	41.1	139.0	59.24	42.9	138.5	49.21	39.0	121.48
August.....	73.48	38.2	191.1	62.32	39.8	157.8	64.55	39.8	162.1	57.69	41.0	140.7	59.03	42.2	139.9	49.48	39.1	121.48
September.....	76.91	38.8	195.5	63.02	39.8	159.5	64.61	39.9	163.0	58.19	41.2	141.1	59.27	42.0	141.3	49.83	39.5	121.48
Chemicals and allied products—Continued																		
Soap	Soap			Rayon and allied products			Chemicals, not elsewhere classified			Explosives and safety fuses			Ammunition, small-arms			Cottonseed oil		
1939: Average.....	\$28.11	39.8	70.7	\$24.52	37.9	64.6	\$31.30	40.0	78.4	\$29.99	38.8	77.3	\$22.68	30.0	61.2	\$13.70	44.3	31.1
1941: January.....	29.58	40.0	74.0	27.26	39.2	69.6	33.10	40.3	82.2	31.56	37.8	83.5	24.05	38.6	62.3	15.55	44.6	31.3
1947: September.....	62.05	44.0	141.0	49.74	39.6	125.7	57.98	40.5	143.2	57.39	41.6	138.1	52.60	42.1	125.0	36.30	51.0	71.47
October.....	61.58	43.5	141.4	48.71	39.0	124.9	58.46	40.8	143.2	56.65	40.5	140.0	53.13	42.9	123.9	38.84	53.8	72.47
November.....	62.66	44.1	142.0	49.07	39.2	125.2	59.21	40.9	144.8	58.20	40.7	143.0	53.30	43.1	123.8	38.47	52.6	73.47
December.....	65.01	44.7	145.6	49.73	39.2	126.8	60.07	41.2	145.7	57.36	40.0	143.3	53.85	43.3	124.3	38.68	52.9	73.47
1948: January.....	64.69	44.1	140.6	50.36	39.2	128.4	60.80	41.2	147.7	58.85	40.8	144.1	48.09	40.5	118.8	38.86	52.2	74.48
February.....	64.54	43.8	147.5	50.33	39.3	128.0	60.82	41.1	147.9	59.20	41.2	143.8	48.19	40.6	118.7	36.59	48.8	75.48
March.....	62.83	42.8	146.7	50.68	39.5	128.4	60.84	41.0	148.3	58.24	40.5	143.7	49.04	40.7	120.4	37.95	50.3	75.48
April.....	64.29	42.1	152.8	51.29	39.8	128.7	60.97	41.1	148.4	56.47	39.6	142.7	49.37	40.8	120.9	37.50	49.4	75.48
May.....	64.99	42.1	154.3	51.46	39.7	129.6	61.48	41.2	149.3	59.34	40.6	146.2	50.28	41.3	121.8	38.07	49.0	77.48
June.....	63.09	41.5	152.1	51.72	39.8	129.8	63.17	41.9	150.9	61.58	41.9	147.1	51.48					

TABLE C-1: Hours and Gross Earnings in Manufacturing and Nonmanufacturing Industries¹—Con.

MANUFACTURING—Continued

Year and month	Chemicals and allied products—Con.			Products of petroleum and coal												Rubber products		
	Fertilizers			Total: Products of petroleum and coal			Petroleum refining			Coke and by-products			Roofing materials			Total: Rubber products		
	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings
37.4 1940: Average.....	\$14.71	35.8	41.2	\$32.62	36.5	89.4	\$34.97	36.1	97.4	-----	-----	-----	-----	-----	-----	\$27.84	36.9	75.4
37.8 1941: January.....	14.89	34.8	42.9	32.46	36.6	88.7	34.46	35.7	97.0	-----	-----	-----	-----	-----	-----	30.38	39.0	77.9
40.2 1947: September.....	38.85	41.8	93.0	61.84	41.0	150.9	64.75	40.7	159.1	\$53.08	38.6	138.1	\$57.56	44.7	128.7	57.76	39.9	144.7
40.0 1948: October.....	36.85	40.5	90.9	60.94	40.5	150.5	63.51	39.9	159.3	53.83	39.9	135.0	58.88	45.2	130.2	57.62	40.1	143.8
40.0 1949: November.....	35.53	39.2	90.7	62.54	41.2	151.8	65.86	41.0	160.7	54.06	39.8	135.9	58.74	45.4	130.6	57.99	39.9	145.4
40.4 1940: December.....	36.56	40.7	89.7	63.21	40.8	155.1	66.32	40.3	164.7	54.37	39.7	137.1	60.60	45.5	133.1	59.47	40.9	145.4
39.5 1948: January.....	37.23	41.5	89.7	64.47	40.7	158.6	67.54	39.8	169.9	56.70	40.4	140.4	58.35	44.4	131.4	57.33	39.7	144.4
39.1 1949: February.....	34.96	39.7	88.1	64.58	40.8	158.1	67.64	40.0	168.9	57.06	40.9	139.5	58.67	44.1	133.2	54.70	38.5	142.1
39.5 1940: March.....	36.25	41.6	87.1	64.62	40.6	159.3	67.77	40.1	169.2	56.74	40.3	140.8	59.51	44.3	134.2	53.24	37.8	140.8
39.2 1941: April.....	36.49	41.5	88.0	64.45	40.3	160.0	68.50	40.2	170.4	53.54	38.4	139.5	58.84	44.0	133.8	53.39	37.8	141.2
39.1 1942: May.....	37.40	41.4	90.4	67.16	41.2	163.1	71.14	40.9	174.0	57.01	40.2	141.9	60.66	44.9	135.2	55.45	39.0	142.4
39.1 1943: June.....	39.34	41.2	95.4	67.18	40.7	165.0	70.96	40.2	176.3	57.84	40.3	143.7	61.09	44.7	136.7	57.14	39.7	143.9
38.9 1944: July.....	40.82	42.1	97.0	69.45	40.8	170.3	74.01	40.4	183.2	57.44	39.8	144.3	62.78	45.2	139.0	58.37	39.7	147.2
39.1 1945: August.....	40.37	40.7	99.1	70.71	41.2	171.6	75.13	41.0	183.2	59.97	39.9	150.3	63.58	44.0	141.5	60.47	40.3	150.0
39.3 1946: September.....	40.52	40.1	101.0	68.65	40.4	169.8	72.16	40.2	179.4	60.65	39.0	154.9	63.75	44.4	143.4	59.42	39.5	150.4
Rubber products—Continued																		
Miscellaneous industries																		
Year and month	Rubber tires and inner tubes			Rubber boots and shoes			Rubber goods, other			Total: Miscellaneous industries			Instruments (professional and scientific), and fire-control equipment			Pianos, organs, and parts		
	Rubber tires and inner tubes	Rubber boots and shoes	Rubber goods, other	Rubber tires and inner tubes	Rubber boots and shoes	Rubber goods, other	Total: Miscellaneous industries	Instruments (professional and scientific), and fire-control equipment	Pianos, organs, and parts	Rubber tires and inner tubes	Rubber boots and shoes	Rubber goods, other	Total: Miscellaneous industries	Instruments (professional and scientific), and fire-control equipment	Pianos, organs, and parts	Rubber tires and inner tubes	Rubber boots and shoes	Rubber goods, other
	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents
39.7 1940: Average.....	\$33.36	35.0	95.7	\$22.80	37.5	60.7	\$23.34	38.9	60.5	\$24.48	39.2	62.4	\$35.33	45.7	77.3	-----	-----	-----
39.3 1941: January.....	36.67	37.7	97.5	26.76	41.9	63.9	24.97	39.4	63.9	25.35	39.3	64.5	-----	-----	-----	-----	-----	-----
40.4 1947: September.....	64.75	38.9	166.1	49.02	41.8	119.4	50.40	40.9	123.4	47.91	40.2	119.1	55.00	39.8	136.1	\$53.81	41.9	129.5
40.4 1948: October.....	63.78	38.7	164.7	51.28	42.4	121.1	51.03	41.4	123.2	48.74	40.6	120.0	55.67	39.9	137.5	52.64	40.8	130.1
40.4 1949: November.....	64.86	38.9	166.1	49.26	40.6	121.3	51.27	41.0	125.2	49.14	40.7	120.7	56.06	40.0	136.9	54.24	41.6	131.8
40.4 1940: December.....	65.74	39.5	165.8	54.72	44.5	123.1	52.93	41.8	126.1	50.21	41.2	121.9	57.99	40.8	139.1	56.25	42.9	132.6
40.2 1948: January.....	62.72	38.2	164.6	51.08	42.1	121.4	51.79	41.1	126.0	49.60	40.4	122.7	59.59	41.2	141.9	52.52	40.4	131.1
40.2 1949: February.....	58.22	36.0	161.3	50.65	41.7	121.4	51.33	40.8	125.8	50.11	40.8	123.0	57.20	40.0	138.8	51.88	40.0	130.5
39.8 1940: March.....	55.54	34.8	159.9	51.42	42.2	121.9	50.60	40.4	125.1	49.84	40.6	122.9	57.54	40.1	140.7	51.82	40.3	128.8
39.4 1941: April.....	56.54	35.3	160.3	50.59	41.7	121.4	50.16	39.9	125.6	49.60	40.4	122.8	58.16	40.5	141.3	52.34	40.8	128.6
39.5 1942: May.....	61.15	37.4	163.6	50.61	41.7	121.4	50.34	40.0	126.0	50.19	40.3	124.4	58.35	40.2	143.0	52.36	40.8	128.6
39.0 1943: June.....	63.96	38.8	165.1	50.69	41.7	121.5	51.15	40.2	127.2	50.92	40.3	126.2	57.73	39.7	143.4	52.11	40.9	128.0
39.1 1944: July.....	66.30	39.3	168.4	52.12	42.3	123.1	51.07	39.4	129.6	50.02	39.4	126.9	56.68	39.7	144.8	52.07	40.9	128.3
39.5 1945: August.....	68.29	39.5	173.0	52.53	41.5	126.6	53.70	40.9	131.2	51.25	40.3	127.1	58.44	40.0	145.8	52.42	40.7	129.3
39.5 1946: September.....	65.27	37.7	173.2	53.22	41.7	128.2	54.59	40.9	133.4	51.75	40.5	127.9	59.53	40.2	147.5	52.51	40.3	130.8
NONMANUFACTURING																		
Year and month	Coal			Metal			Iron			Copper			Lead and zinc					
	Anthracite ²			Bituminous ²			Total: Metal			Iron			Copper					
	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents
0 7.2 1940: Average.....	\$25.67	27.7	92.3	\$23.88	27.1	88.6	\$28.93	40.9	70.8	\$26.36	35.7	73.8	\$28.08	41.9	67.9	\$26.39	38.7	68.3
6 7.1 1941: January.....	25.13	27.0	92.5	26.00	29.7	88.5	30.63	41.0	74.7	29.26	39.0	75.0	30.93	41.8	74.9	28.61	38.2	74.9
2 7.4 1947: September.....	67.37	38.2	176.5	71.19	39.1	181.9	57.01	41.6	137.0	54.12	39.6	136.8	61.57	44.2	139.3	56.67	41.0	138.3
8 7.5 1948: October.....	71.40	40.0	178.4	71.91	39.9	179.8	57.39	42.3	135.6	55.11	40.7	135.5	60.78	44.8	135.7	57.48	41.5	138.6
3 7.5 1949: November.....	63.43	36.2	175.4	71.77	38.5	185.1	57.55	41.7	138.0	54.83	39.9	137.6	60.49	44.0	137.5	58.58	41.4	141.6
4 7.5 1940: December.....	67.42	38.4	175.6	75.22	41.2	182.6	58.11	42.7	136.0	54.26	40.3	134.6	62.30	45.5	137.0	60.83	43.3	140.6
0 7.5 1948: January.....	68.79	39.0	176.4	75.78	40.9	184.7	58.23											

TABLE C-1: Hours and Gross Earnings in Manufacturing and Nonmanufacturing Industries¹—Continued
NONMANUFACTURING—Continued

Year and month	Mining—Continued						Public utilities											
	Quarrying and nonmetallic			Crude petroleum and natural gas production			Street railways and busses ²			Telephone ³			Telegraph ⁴			Electric light and power		
	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings
1939: Average.....	\$21.61	30.2	Cents	\$34.00	38.3	Cents	\$33.13	45.9	Cents	\$31.94	30.1	Cents	\$34.38	39.6	Cents			
1941: January.....	22.06	38.2	55.0	33.99	37.7	87.3	33.63	45.3	71.4	32.52	30.7	82.2	35.49	39.4	80.9	34.9	39.4	80.9
1947: September.....	53.45	40.1	115.6	61.37	40.3	151.0	58.57	46.1	126.5	48.02	39.1	\$123.0	\$54.95	44.5	123.4	58.29	42.0	130.0
October.....	54.44	40.4	116.9	60.51	40.0	149.4	58.69	45.7	126.5	48.77	39.3	124.1	54.92	44.8	122.7	58.44	42.1	130.0
November.....	53.05	44.6	117.8	62.94	40.9	155.4	58.27	45.4	127.6	49.44	39.5	125.4	55.10	44.0	125.3	60.33	42.4	142.0
December.....	52.39	44.4	117.6	60.90	39.5	154.3	60.11	46.8	128.8	47.83	39.0	122.9	55.14	43.9	125.7	59.01	42.2	141.0
1948: January.....	50.92	42.7	118.7	64.53	39.9	162.7	60.73	46.3	129.9	48.20	38.9	124.1	55.81	44.4	125.7	59.87	42.4	142.0
February.....	50.39	42.1	119.9	65.77	40.4	163.8	62.15	47.7	129.5	47.82	38.7	123.8	56.26	44.5	126.5	59.60	42.2	142.0
March.....	51.04	42.9	119.0	63.44	39.7	160.5	61.36	47.3	129.5	47.31	38.7	122.3	56.19	44.4	126.7	58.27	41.6	140.0
April.....	52.83	43.7	120.6	63.96	40.0	159.9	60.10	46.6	129.3	47.56	38.8	122.5	59.45	44.1	134.9	59.10	41.8	142.0
May.....	54.73	44.4	122.6	65.88	40.2	164.6	60.32	46.8	130.2	48.82	39.4	124.0	62.12	45.0	138.1	59.83	41.7	142.0
June.....	55.38	45.0	122.8	64.88	39.5	163.6	61.21	46.8	131.5	48.67	39.5	123.2	61.63	45.1	136.7	60.41	41.8	142.0
July.....	55.83	44.1	126.6	67.17	40.1	167.6	62.01	47.0	132.8	49.19	39.8	123.7	63.10	45.8	137.9	61.46	41.8	142.0
August.....	55.55	45.7	128.3	69.59	41.3	168.2	62.68	47.5	132.7	48.35	39.4	122.9	62.59	45.6	137.3	61.46	42.1	142.0
September.....	57.70	44.6	128.8	67.58	39.6	171.1	62.29	46.5	135.2	49.22	39.5	125.0	61.83	44.8	137.9	61.88	41.7	142.0
Trade																		
Wholesale			Retail														Furniture and house furnishings	
			Total: Retail			Food			General merchandise			Apparel			Furniture and house furnishings			
1939: Average.....	\$29.85	41.7	Cents	\$21.17	43.0	Cents	\$23.37	43.9	Cents	\$17.80	38.8	Cents	\$21.23	38.8	Cents	\$28.62	44.5	Cents
1941: January.....	30.59	40.6	71.5	21.53	42.9	54.9	23.78	43.6	52.5	18.22	38.8	46.6	21.89	39.0	54.3	27.96	43.9	56.0
1947: September.....	53.65	41.2	128.1	37.06	40.0	101.2	44.15	40.1	105.1	31.85	36.3	85.4	37.02	36.9	101.1	50.23	42.6	121.0
October.....	53.68	41.3	128.9	36.74	40.0	101.3	44.08	40.2	105.8	31.50	36.1	86.0	37.20	36.8	102.3	51.43	42.4	124.0
November.....	54.70	41.4	131.4	37.14	39.5	102.5	44.92	39.6	108.6	31.15	35.5	85.6	37.40	36.5	102.7	52.13	42.5	121.0
December.....	54.97	41.6	130.0	37.36	39.7	101.6	44.74	39.9	107.9	31.87	36.0	85.3	38.18	37.2	102.4	53.79	43.2	128.0
1948: January.....	54.36	41.0	130.9	37.62	39.8	104.4	45.46	39.9	110.8	32.09	35.9	88.9	37.68	36.9	100.7	50.62	42.3	121.0
February.....	55.87	41.1	134.3	38.33	40.0	105.0	46.33	39.7	111.9	32.09	35.7	88.3	37.94	37.3	100.2	53.05	43.9	125.0
March.....	55.17	40.9	133.4	38.89	39.8	104.4	46.14	*40.0	112.3	32.28	35.3	87.8	37.50	36.2	102.5	51.30	43.7	124.0
April.....	55.84	41.0	134.6	39.27	39.8	105.5	46.66	*39.6	115.0	33.17	35.3	89.5	38.23	36.6	103.0	50.24	43.5	120.0
May.....	56.61	41.2	136.3	39.84	39.9	106.4	47.08	39.6	114.8	34.04	35.2	90.7	38.54	36.5	104.0	50.96	43.4	128.0
June.....	56.00	41.1	135.3	40.52	40.3	107.0	48.52	40.6	115.9	35.04	35.8	91.5	39.33	36.9	104.9	50.86	43.4	128.0
July.....	56.54	41.2	136.5	41.19	40.8	107.7	49.44	41.0	116.2	35.30	36.5	91.5	39.48	37.2	104.5	51.31	43.3	128.0
August.....	57.51	41.3	137.9	41.19	41.0	108.0	49.35	41.1	116.0	35.03	36.5	91.4	39.17	37.1	104.3	51.33	43.7	128.0
September.....	57.49	41.2	138.1	40.48	40.2	108.6	48.86	40.3	117.7	34.20	35.6	91.3	38.96	36.8	105.0	50.87	43.2	129.0

See footnotes at end of table.

ries¹—Con. TABLE C-1: Hours and Gross Earnings in Manufacturing and Nonmanufacturing Industries¹—Con.
NONMANUFACTURING—Continued

Year and month	Trade—Continued						Finance ²		Service								
	Retail—Continued						Brokerage	Insurance	Hotels ³ (year-round)			Power laundries			Cleaning and dyeing		
	Automotive			Lumber and building materials					Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. hours	Avg. hrly. earnings
	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings	Avg. wkly. earnings	Avg. wkly. hours	Avg. hrly. earnings											
39.6																	
39.4																	
42.0																	
42.1																	
42.4																	
42.2																	
47: September	51.55	45.3	115.9	48.24	42.3	113.5	50.32	51.47	29.86	44.1	67.2	33.44	42.4	78.6	37.67	41.9	91.1
October	52.37	45.7	116.5	48.70	42.9	113.6	51.38	51.96	30.45	44.0	68.4	32.97	42.3	78.7	37.70	41.5	91.9
November	52.62	45.3	117.4	47.65	42.1	113.9	54.51	53.98	30.54	44.4	68.7	32.86	41.7	78.6	37.23	40.9	92.5
December	52.71	45.5	116.8	49.03	42.7	114.3	52.85	55.92	30.89	44.1	69.3	33.88	42.6	79.7	37.70	41.5	92.1
48: January	51.66	44.4	117.9	48.19	41.8	115.4	62.35	55.09	30.55	43.9	69.5	33.99	42.3	80.7	37.64	41.4	92.4
February	53.03	45.0	118.6	49.56	42.1	117.4	63.37	56.63	31.19	44.6	69.5	33.54	41.9	80.2	36.55	40.5	92.3
March	52.98	44.6	120.2	49.24	42.5	117.0	62.60	55.51	30.96	44.0	69.5	33.74	42.0	80.5	37.96	41.5	92.4
April	54.53	45.5	121.6	49.64	42.6	117.5	65.76	54.94	31.59	44.2	70.0	34.20	42.2	81.0	39.18	42.1	93.3
May	54.49	45.5	122.0	50.32	42.8	119.3	71.15	56.22	31.70	44.2	70.7	34.22	41.8	81.7	39.13	42.0	93.6
June	54.65	45.5	122.1	51.08	43.2	120.2	69.35	54.75	31.88	44.1	71.1	34.36	41.8	82.3	40.14	42.4	94.7
July	55.03	45.1	123.7	51.31	42.8	121.6	68.12	55.22	32.04	44.0	71.4	34.55	42.2	82.0	39.02	41.7	94.2
August	56.04	45.6	125.1	52.51	43.4	122.0	65.42	55.00	32.34	44.7	71.3	33.70	41.1	82.2	37.48	40.0	94.1
September	55.87	45.3	124.7	52.00	42.4	123.1	63.59	54.32	32.20	43.6	72.7	34.56	41.8	82.8	39.36	41.1	95.3

¹ These figures are based on reports from cooperating establishments covering both full- and part-time employees who worked or received pay during the pay period ending nearest the 15th of the month. As not all reporting firms supply man-hour data, the average weekly hours and average hourly earnings for individual industries are based on a slightly smaller sample than are average weekly earnings.

For manufacturing, mining, power laundries, and cleaning and dyeing industries, the data relate to production and related workers only. For the remaining industries, unless otherwise noted, the data relate to all non-supervisory employees and working supervisors. The size of the reporting sample, methods of computation, and additional tables on "real" and "netpendable" weekly earnings are contained in the Bureau's monthly mimeographed release, "Hours and Earnings—Industry Report," which is available upon request. Data for 1939 and January 1941, for some industries, are not strictly comparable with the periods currently presented. All series, by month, are available upon request to the Bureau of Labor Statistics. Such requests should specify the series desired. Data for the two current months are subject to revision without notation. Revised figures for earlier months are identified by an asterisk for the first month's publication of such data.

² New series beginning with month and year shown below; not comparable with data shown for earlier periods:

Glass products made from purchased glass.—May 1948; comparable April data are \$44.36 and 112.1 cents.

³ April 1948 data reflect work stoppages.

⁴ Data include private and municipal street-railway companies and affiliated, subsidiary, or successor trolley-bus and motor-bus companies.

⁵ Prior to April 1945 the averages of hours and earnings related to all employees except executives; beginning with April 1945 these averages reflect mainly the hours and earnings of employees subject to the Fair Labor Standards Act. At the same time the reporting sample was expanded to include a greater number of employees of "long lines." The April 1945 data are \$40.72, 42.9 hours, and 95.2 cents on the old basis, and \$37.50, 40.6 hours, and 92.6 cents on the new basis.

⁶ Data relate to all land-line employees except those compensated on a commission basis. Excludes general and divisional headquarters personnel, trainees in school, and messengers.

⁷ Data on average weekly hours and average hourly earnings are not available.

⁸ Money payments only; additional value of board, room, uniforms, and tips, not included.

⁹ Revised.

TABLE C-2: Estimated Average Hourly Earnings, Gross and Exclusive of Overtime, of Product Workers in Manufacturing Industries¹

[In cents]

Year and month	All manufacturing		Durable goods		Nondurable goods		Year and month	All manufacturing		Durable goods		Nondurable goods	
	Gross	Exclud-ing over-time	Gross	Exclud-ing over-time	Gross	Exclud-ing over-time		Gross	Exclud-ing over-time	Gross	Exclud-ing over-time	Gross	Exclud-ing over-time
January 1941	68.3	66.4	74.9	72.2	61.0	60.1	1947: September	124.9	120.9	133.1	128.9	116.5	116.5
January 1945	104.6	97.0	114.4	105.3	89.1	84.0	October	125.8	121.6	133.7	129.2	117.5	117.5
July 1945	103.3	96.9	112.7	105.2	90.2	85.4	November	126.8	122.7	134.6	130.2	118.5	118.5
June 1946	108.4	105.3	116.5	113.4	100.3	97.2	December	127.8	122.8	135.4	129.9	119.6	119.6
1941: Average	72.9	70.2	80.8	77.0	64.0	62.5	1948: January	128.5	124.3	135.5	130.8	121.0	121.0
1942: Average	85.3	80.5	94.7	88.1	72.3	69.8	February	128.7	124.7	135.2	130.9	121.7	121.7
1943: Average	96.1	89.4	105.9	97.6	80.3	76.3	March	128.9	124.8	135.2	130.6	122.0	122.0
1944: Average	101.9	94.7	111.7	102.9	86.1	81.4	April	129.2	125.3	135.7	131.4	122.0	122.0
1945: Average	102.3	96.3	111.1	104.2	90.4	85.8	May	130.1	126.2	136.6	132.4	123.0	123.0
1946: Average	108.4	104.9	115.6	112.2	101.2	97.8	June	131.6	127.5	138.5	134.1	124.2	124.2
1947: Average	122.1	118.2	129.2	125.0	114.5	110.9	July	133.2	129.5	140.7	136.9	125.2	125.2
							August ²	134.9	130.9	143.1	138.5	126.2	126.2
							September ²	136.2	132.3	145.0	141.0	127.1	127.1

¹ Overtime is defined as work in excess of 40 hours a week and paid for at time and one-half. The method of estimating average hourly earnings exclusive of overtime makes no allowance for special rates of pay for work done on holidays.

² Eleven-month average only; August 1945 excluded because of V-J holiday period.

³ Preliminary.

TABLE C-3: Average Earnings and Hours on Private Construction Projects, by Type of Firm¹

Year and month	All types, private construction projects	Building construction												Special building trades					
		Total building				General contractors				All trades ²				Plumbing and heating			Painting and dry-cleaning		
		Average weekly earnings ³	Average weekly hours	Average hourly earnings ³	Average weekly earnings ³	Average weekly hours	Average hourly earnings ³	Average weekly earnings ³	Average weekly hours	Average hourly earnings ³	Average weekly hours	Average hourly earnings ³	Average weekly hours	Average hourly earnings ³	Average weekly hours	Average hourly earnings ³	Average weekly hours	Average hourly earnings ³	
		(1)	(1)	(1)	\$31.70	33.1	\$0.958	\$30.56	33.3	\$0.918	\$33.11	32.7	\$1.012	\$32.87	34.6	\$0.949	\$33.05	32.5	\$1.048
1940: Average	(1)	(1)	(1)	\$31.70	33.1	\$0.958	\$30.56	33.3	\$0.918	\$33.11	32.7	\$1.012	\$32.87	34.6	\$0.949	\$33.05	32.5	\$1.048	
1941: January	(1)	(1)	(1)	32.18	32.6	.986	30.10	32.7	.946	33.42	32.6	1.025	34.16	35.8	.955	31.49	29.7	1.031	
1947: September	65.09	38.3	\$1.697	65.36	37.9	1.723	61.16	37.2	1.646	70.61	38.9	1.816	71.19	39.1	1.819	66.13	37.4	1.737	
October	66.03	38.5	1.716	66.36	38.1	1.743	62.25	37.4	1.665	71.32	38.9	1.833	71.98	39.2	1.836	67.29	37.6	1.741	
November	64.02	36.9	1.736	64.55	36.6	1.765	60.55	35.8	1.690	69.36	37.5	1.851	71.90	38.4	1.872	63.56	35.0	1.750	
December	66.47	38.0	1.748	67.31	37.9	1.774	62.86	37.1	1.695	72.64	38.9	1.865	76.61	40.6	1.887	65.33	36.0	1.758	
1948: January	65.73	37.3	1.762	66.28	37.2	1.781	62.05	36.4	1.707	71.43	38.2	1.868	75.79	40.7	1.862	65.79	35.7	1.763	
February	66.17	37.0	1.788	66.31	36.7	1.806	62.70	36.3	1.727	70.99	37.3	1.809	74.17	39.1	1.895	65.03	34.7	1.770	
March	66.73	37.4	1.786	66.89	37.1	1.805	63.28	36.7	1.724	71.47	37.5	1.905	74.01	39.0	1.897	66.80	35.7	1.774	
April	67.25	37.5	1.795	67.31	37.0	1.818	63.62	36.5	1.745	72.08	37.7	1.909	74.64	38.9	1.919	68.29	36.3	1.780	
May	67.90	37.5	1.812	68.13	37.1	1.835	64.74	36.5	1.772	72.67	37.9	1.916	75.55	39.1	1.933	69.76	36.6	1.784	
June	70.57	38.5	1.835	70.49	37.9	1.858	67.00	37.4	1.789	75.14	38.6	1.948	79.03	40.0	1.976	70.27	36.4	1.791	
July	71.53	38.4	1.865	71.38	37.8	1.890	67.90	37.2	1.826	75.88	38.5	1.972	78.89	39.2	2.014	71.20	36.8	1.799	
August ²	71.90	38.4	1.876	71.89	37.8	1.901	68.47	37.4	1.833	76.57	38.5	1.991	79.81	39.1	2.041	71.27	36.5	1.804	
September ²	72.01	38.1	1.889	72.09	37.6	1.917	68.69	37.1	1.852	76.54	38.2	2.001	78.80	38.6	2.042	72.12	36.6	1.806	

See footnotes at end of table.

TABLE C-3: Average Earnings and Hours on Private Construction Projects, by Type of Firm¹—Con.

Building construction—Continued																	
Special building trades—Continued																	
Electrical work			Masonry			Plastering and lathing			Carpentry			Roofing and sheet metal			Excavation and foundation		
Avg. wkly. earnings ^a	Avg. wkly. hours	Avg. hourly earnings	Avg. wkly. earnings ^a	Avg. wkly. hours	Avg. hourly earnings	Avg. wkly. earnings ^a	Avg. wkly. hours	Avg. hourly earnings	Avg. wkly. earnings ^a	Avg. wkly. hours	Avg. hourly earnings	Avg. wkly. earnings ^a	Avg. wkly. hours	Avg. hourly earnings	Avg. wkly. earnings ^a	Avg. wkly. hours	Avg. hourly earnings
\$41.18	34.5	\$1.196	\$29.47	29.8	\$0.988	\$36.60	28.5	\$1.286	\$31.23	33.0	\$0.947	\$28.07	31.8	\$0.883	\$26.53	30.9	\$0.856
43.18	36.5	1.184	25.66	25.3	1.012	35.36	27.5	1.287	30.40	31.2	.974	27.60	30.3	.910	23.86	29.1	.820
79.92	40.3	1.985	66.68	38.1	1.752	76.05	38.1	1.995	65.75	39.0	1.684	63.27	37.9	1.669	64.27	39.8	1.613
81.87	40.8	2.006	67.19	37.7	1.781	75.60	37.4	2.019	66.55	38.9	1.710	62.48	38.4	1.626	63.51	38.8	1.638
79.64	39.9	1.995	65.39	36.0	1.817	73.27	35.3	2.075	66.50	38.4	1.733	57.76	35.4	1.631	60.08	36.7	1.630
81.20	40.6	2.000	66.69	36.3	1.836	76.63	36.5	2.100	64.94	37.8	1.718	60.64	37.1	1.634	63.33	37.8	1.676
81.62	40.6	2.012	61.51	33.0	1.862	75.84	36.7	2.069	63.94	36.5	1.750	56.54	34.5	1.638	63.79	37.7	1.690
82.10	40.0	2.052	59.50	31.6	1.881	74.81	35.9	2.087	61.60	35.2	1.752	55.38	33.7	1.643	64.37	37.3	1.728
83.75	40.6	2.064	61.38	32.6	1.883	75.10	36.0	2.087	62.93	35.4	1.778	55.86	34.4	1.622	61.57	36.4	1.688
81.76	39.7	2.061	64.61	34.3	1.885	76.61	36.6	2.094	68.41	38.0	1.709	58.33	35.3	1.652	63.40	37.9	1.672
81.44	39.7	2.051	66.91	34.8	1.923	79.22	37.1	2.137	69.55	38.8	1.705	59.89	35.9	1.669	65.72	39.3	1.671
82.60	39.8	2.075	71.21	36.2	1.967	83.54	38.2	2.185	70.64	39.4	1.794	63.15	36.8	1.717	68.45	40.4	1.695
84.31	40.3	2.090	74.78	37.8	1.977	83.12	37.4	2.223	70.28	39.2	1.795	64.42	37.1	1.736	66.63	38.6	1.724
85.63	40.3	2.126	73.83	37.0	1.994	82.07	36.8	2.231	70.65	39.3	1.800	65.36	37.7	1.734	69.11	39.5	1.749
85.52	39.8	2.151	73.52	36.8	1.999	83.22	37.1	2.245	69.36	38.5	1.802	66.08	37.8	1.748	70.45	39.7	1.772

Year and month	Nonbuilding construction											
	Total nonbuilding			Highway and street			Heavy construction			Other		
	Avg. wkly. earnings ¹	Avg. wkly. hours	Avg. hourly earnings									
All Average	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)
All: January												
7: September	\$63.85	40.2	\$1.587	\$59.68	39.9	\$1.495	\$66.84	40.1	\$1.666	\$58.26	40.9	\$1.425
October	64.53	40.3	1.602	60.66	40.2	1.510	67.11	40.0	1.676	60.08	41.1	1.461
November	61.67	38.2	1.615	57.55	37.7	1.528	64.03	38.1	1.680	58.50	38.9	1.502
December	62.83	38.4	1.638	60.21	38.4	1.570	65.24	38.4	1.697	58.35	38.2	1.528
8: January	63.28	37.8	1.676	61.25	37.9	1.618	65.57	37.6	1.745	58.14	38.1	1.524
February	65.42	38.5	1.700	60.96	37.4	1.629	68.78	38.6	1.781	61.24	39.0	1.570
March	65.85	38.9	1.692	60.71	37.7	1.609	68.79	39.3	1.750	62.89	38.9	1.615
April	66.92	39.6	1.691	61.03	38.5	1.601	69.53	39.9	1.743	65.08	39.8	1.637
May	66.72	39.1	1.706	63.09	38.8	1.627	69.30	39.4	1.760	63.86	38.8	1.647
June	70.93	40.9	1.735	67.53	40.8	1.656	74.06	41.5	1.785	66.61	39.5	1.685
July ⁶	72.27	41.2	1.756	69.73	42.2	1.652	74.42	41.0	1.814	69.23	40.6	1.705
August ⁶	72.26	40.9	1.768	68.85	41.6	1.657	75.06	40.6	1.847	69.02	40.7	1.694
September ⁷	71.50	40.4	1.769	69.21	41.4	1.672	73.99	39.8	1.860	68.86	40.8	1.688

Covers all contract construction firms reporting to the Bureau during the months shown (over 14,000), but not necessarily identical establishments. The data include all employees of these construction firms working at the time of privately financed projects (skilled, semiskilled, unskilled, superintendents, time clerks, etc.). Employees of these firms engaged on publicly financed projects and off-site work are excluded.

⁴ Hourly earnings, when multiplied by weekly hours of work, may not exactly equal weekly earnings because of rounding.

⁴ Not available prior to February 1946.

• Includes general contractor

other special buil t Bridges

D: Prices and Cost of Living

TABLE D-1: Consumers' Price Index¹ for Moderate-Income Families in Large Cities, by Group of Commodities

[1935-39 = 100]

Year and month	All items	Food	Apparel	Rent	Fuel, electricity, and refrigeration			Housefurnishings	Miscellaneous
					Total	Gas and electricity	Other fuels and ice		
1913: Average	70.7	70.9	69.3	92.2	61.9	(*)	(*)	50.1	1
1914: July	71.7	81.7	69.8	92.2	62.3	(*)	(*)	60.8	2
1918: December	118.0	149.6	147.9	97.1	90.4	(*)	(*)	121.2	3
1920: June	149.4	185.0	209.7	119.1	104.8	(*)	(*)	169.7	4
1929: Average	122.5	132.5	115.3	141.4	112.5	(*)	(*)	111.7	5
1932: Average	97.6	86.5	90.8	116.9	103.4	(*)	(*)	85.4	6
1939: Average	99.4	95.2	100.5	104.3	99.0	98.9	99.3	101.3	7
August 15	98.6	93.5	100.3	104.3	97.5	99.0	96.3	100.6	8
1940: Average	100.2	96.6	101.7	104.6	99.7	98.0	101.6	100.5	9
1941: Average	105.2	105.5	106.3	106.2	102.2	97.1	107.4	107.3	10
January 1	100.8	97.6	101.2	105.0	100.8	97.5	104.0	100.2	11
December 15	110.5	113.1	114.8	108.2	104.1	96.7	111.3	116.8	12
1942: Average	116.5	123.9	124.2	108.5	105.4	96.7	113.9	122.2	13
1943: Average	123.6	138.0	129.7	108.0	107.7	96.1	119.0	125.6	14
1944: Average	125.5	136.1	138.8	108.2	109.8	95.8	123.4	136.4	15
1945: Average	128.4	139.1	145.9	108.3	110.3	95.0	125.1	145.8	16
August 15	129.3	140.9	146.4	(*)	111.4	95.2	127.2	146.0	17
1946: Average	139.3	159.6	160.2	108.6	112.4	92.4	132.0	159.2	18
June 15	133.3	145.6	157.2	108.5	110.5	92.1	128.4	156.1	19
November 15	152.2	187.7	171.0	(*)	114.8	91.8	137.2	171.0	20
1947: Average	159.2	193.8	185.8	111.2	121.1	92.0	149.5	184.4	21
October 15	163.8	201.6	189.0	114.9	125.2	92.2	157.4	187.8	22
November 15	164.9	202.7	190.2	115.2	126.9	92.5	160.5	188.9	23
December 15	167.0	206.9	191.2	115.4	127.8	92.6	162.0	191.4	24
1948: January 15	168.8	209.7	192.1	115.9	129.5	93.1	165.0	192.3	25
February 15	167.5	204.7	195.1	116.0	130.0	93.2	165.9	193.0	26
March 15	166.9	202.8	196.3	116.3	130.3	93.8	166.0	194.9	27
April 15	169.3	207.9	196.4	116.3	130.7	93.9	166.7	194.7	28
May 15	170.5	210.9	197.5	116.7	131.8	94.1	168.6	193.6	29
June 15	171.7	214.1	196.9	117.0	132.6	94.2	170.1	194.8	30
July 15	173.7	216.8	197.1	117.3	134.8	94.4	174.2	195.9	31
August 15	174.5	216.6	199.7	117.7	136.8	94.5	178.1	196.3	32
September 15	174.5	215.2	201.0	118.5	137.3	94.6	178.9	196.1	33
October 15	173.6	211.5	201.6	118.7	137.8	95.4	(*)	198.8	34

¹ The "consumers' price index for moderate-income families in large cities," formerly known as the "cost of living index" measures average changes in retail prices of selected goods, rents, and services weighted by quantities bought in 1934-36 by families of wage earners and moderate-income workers in large cities whose incomes averaged \$1,524 in 1934-36.

Bureau of Labor Statistics Bulletin 699, Changes in Cost of Living in Large Cities in the United States, 1913-41, contains a detailed description of methods used in constructing this index. Additional information on the consumers' price index is given in a compilation of reports published by the Office of Economic Stabilization, Report of the President's Committee on the Cost of Living.

Mimeographed tables are available upon request showing indexes for all of the cities regularly surveyed by the Bureau and for each of the major groups of living essentials. Indexes for all large cities combined are available since 1913. The beginning date for series of indexes for individual cities varies from city to city but indexes are available for most of the 34 cities since World War I.

² Data not available.

³ Rents not surveyed this month.

TABLE D-2: Consumers' Price Index for Moderate-Income Families, by City,¹ for Selected Periods

[1935-39=100]

City	Oct. 15, 1948	Sept. 15, 1948	Aug. 15, 1948	July 15, 1948	June 15, 1948	May 15, 1948	Apr. 15, 1948	Mar. 15, 1948	Feb. 15, 1948	Jan. 15, 1948	Dec. 15, 1947	Nov. 15, 1947	Oct. 15, 1947	June 15, 1946	Aug. 15, 1939
Average	173.6	174.5	174.5	173.7	171.7	170.5	166.3	166.9	167.8	168.8	167.0	164.9	163.8	133.3	98.6
Atlanta, Ga.	(2)	(2)	176.2	(2)	(2)	170.8	(2)	(2)	169.2	(2)	(2)	167.5	(2)	133.8	98.0
Baltimore, Md.	(2)	179.2	(2)	(2)	176.1	(2)	(2)	170.9	(2)	(2)	171.3	(2)	(2)	135.6	98.7
Birmingham, Ala.	176.9	178.6	179.3	177.0	174.7	173.7	172.7	172.0	172.8	174.4	173.8	171.6	169.7	136.5	98.5
Boston, Mass.	167.8	169.0	168.7	168.6	166.1	164.1	163.6	160.8	161.3	163.1	160.4	158.3	157.5	127.9	97.1
Buffalo, N. Y.	172.7	(2)	(2)	173.1	(2)	(2)	167.2	(2)	(2)	167.4	(2)	(2)	162.6	132.6	98.5
Chicago, Ill.	178.1	179.4	178.8	178.6	176.2	174.9	172.1	169.0	168.8	171.5	170.1	168.3	167.3	130.9	98.7
Cincinnati, Ohio	175.5	176.3	175.7	175.9	173.5	172.3	170.8	169.3	170.1	171.2	170.3	167.1	167.1	132.2	97.3
Cleveland, Ohio	(2)	(2)	179.3	(2)	(2)	173.7	(2)	(2)	171.6	(2)	(2)	166.9	(2)	135.7	100.0
Denver, Colo.	171.0	(2)	(2)	172.5	(2)	(2)	168.5	(2)	(2)	167.0	(2)	(2)	160.4	131.7	98.6
Detroit, Mich.	174.6	175.4	176.1	175.9	174.5	173.2	171.8	168.7	169.0	170.6	169.0	166.6	166.7	136.4	98.5
Houston, Tex.	174.7	175.4	175.2	173.7	172.5	171.5	171.4	170.0	170.4	170.8	169.3	165.8	163.4	130.5	100.7
Indianapolis, Ind.	178.0	(2)	(2)	176.5	(2)	(2)	172.5	(2)	(2)	172.3	(2)	(2)	167.8	131.9	98.0
Jacksonville, Fla.	(2)	179.1	(2)	(2)	178.3	(2)	(2)	172.8	(2)	(2)	173.9	(2)	(2)	138.4	98.5
Kansas City, Mo.	167.5	(2)	(2)	166.3	(2)	(2)	163.3	(2)	(2)	162.4	(2)	(2)	157.9	129.4	98.6
Los Angeles, Calif.	171.8	171.0	171.0	170.3	168.8	169.1	169.3	167.4	168.1	167.6	166.0	164.1	161.3	136.1	100.5
Manchester, N. H.	176.5	(2)	(2)	178.1	(2)	(2)	172.0	(2)	(2)	172.5	(2)	(2)	166.1	134.7	97.8
Memphis, Tenn.	(2)	177.1	(2)	(2)	174.7	(2)	(2)	172.4	(2)	(2)	173.5	(2)	(2)	134.5	97.8
Milwaukee, Wis.	(2)	(2)	174.5	(2)	(2)	171.4	(2)	(2)	166.9	(2)	(2)	164.0	(2)	131.2	97.0
Minneapolis, Minn.	(2)	173.8	(2)	(2)	(2)	171.1	(2)	(2)	167.7	(2)	(2)	166.2	(2)	129.4	99.7
Mobile, Ala.	(2)	177.3	(2)	(2)	173.5	(2)	(2)	169.9	(2)	(2)	170.3	(2)	(2)	132.9	98.6
New Orleans, La.	(2)	(2)	179.8	(2)	(2)	176.5	(2)	(2)	177.1	(2)	(2)	173.2	(2)	138.0	99.7
New York, N. Y.	171.7	173.3	173.3	172.6	169.1	167.5	167.0	164.3	166.4	167.1	164.9	163.3	161.7	135.8	99.0
Norfolk, Va.	(2)	(2)	176.2	(2)	(2)	171.9	(2)	(2)	170.1	(2)	(2)	168.2	(2)	135.2	97.8
Philadelphia, Pa.	174.1	174.8	174.8	172.9	172.1	170.4	169.3	165.5	166.6	168.4	166.3	164.2	162.2	132.5	97.8
Pittsburgh, Pa.	177.1	178.3	178.3	177.8	175.7	173.5	171.9	170.1	170.1	172.3	170.2	168.1	167.8	134.7	98.4
Portland, Maine	(2)	170.7	(2)	(2)	167.4	(2)	(2)	162.7	(2)	(2)	162.0	(2)	(2)	128.7	97.1
Portland, Oreg.	180.1	(2)	(2)	180.3	(2)	(2)	175.8	(2)	(2)	174.4	(2)	(2)	166.5	140.3	100.1
Richmond, Va.	170.0	(2)	(2)	168.9	(2)	(2)	163.4	(2)	(2)	165.1	(2)	(2)	161.7	128.2	98.0
St. Louis, Mo.	(2)	175.0	(2)	(2)	172.1	(2)	(2)	167.8	(2)	(2)	167.9	(2)	(2)	131.2	98.1
San Francisco, Calif.	(2)	177.1	(2)	(2)	174.2	(2)	(2)	171.4	(2)	(2)	168.9	(2)	(2)	137.8	99.3
Savannah, Ga.	178.4	(2)	(2)	180.2	(2)	(2)	177.6	(2)	(2)	175.6	(2)	(2)	171.5	140.6	99.3
Scranton, Pa.	(2)	(2)	174.7	(2)	(2)	170.2	(2)	(2)	166.5	(2)	(2)	165.2	(2)	132.2	96.0
Seattle, Wash.	(2)	(2)	176.2	(2)	(2)	174.3	(2)	(2)	170.7	(2)	(2)	166.2	(2)	137.0	100.3
Washington, D. C.	(2)	(2)	169.2	(2)	(2)	166.7	(2)	(2)	163.2	(2)	(2)	161.7	(2)	133.8	98.6

The indexes are based on time-to-time changes in the cost of goods and services purchased by moderate-income families in large cities. They do not indicate whether it costs more to live in one city than in another.

¹Through June 1947, consumers' price indexes were computed monthly for

21 cities and in March, June, September, and December for 13 additional cities; beginning July 1947 indexes were computed monthly for 10 cities and once every 3 months for 24 additional cities according to a staggered schedule.

TABLE D-3: Consumers' Price Index for Moderate-Income Families, by City and Group of Commodities¹

[1935-39 = 100]

City	Food		Apparel		Rent		Fuel, electricity, and refrigeration				Housefurnishings		Miscellaneous	
	Oct. 15, 1948	Sept. 15, 1948	Oct. 15, 1948	Sept. 15, 1948	Oct. 15, 1948	Sept. 15, 1948	Total		Gas and electricity		Oct. 15, 1948	Sept. 15, 1948	Oct. 15, 1948	Sept. 15, 1948
							Oct. 15, 1948	Sept. 15, 1948	Oct. 15, 1948	Sept. 15, 1948				
Average.....	211.5	215.2	201.6	201.0	118.7	118.5	137.8	137.3	95.4	94.6	198.8	198.1	153.7	152.1
Atlanta, Ga.....	208.3	214.2	(1)	(1)	(2)	(2)	138.2	148.2	77.0	76.9	(1)	(1)	(1)	(1)
Baltimore, Md.....	224.5	228.7	(1)	200.8	(1)	115.6	148.0	148.0	121.3	121.3	(1)	203.5	(1)	(1)
Birmingham, Ala.....	210.8	216.3	209.3	209.0	(1)	(2)	135.6	135.6	79.6	79.6	193.7	192.1	149.3	148.2
Boston, Mass.....	202.6	207.2	193.1	192.3	(1)	114.6	156.0	153.0	119.2	112.5	192.2	189.4	145.5	146.2
Buffalo, N. Y.....	206.4	210.1	200.9	(1)	122.1	(1)	140.2	140.2	96.0	96.0	204.9	(1)	157.3	(1)
Chicago, Ill.....	218.0	221.4	204.0	203.6	(1)	133.7	131.5	131.5	83.5	83.5	184.4	183.4	154.6	154.2
Cincinnati, Ohio.....	214.4	218.0	198.4	198.1	(1)	114.1	145.1	141.8	101.9	95.1	192.2	190.3	154.3	152.8
Cleveland, Ohio.....	220.9	225.6	(1)	(1)	(1)	145.1	144.7	105.6	105.6	(1)	(1)	(1)	(1)	(1)
Denver, Colo.....	208.3	210.5	200.6	(1)	123.4	(1)	112.1	112.6	69.2	69.2	218.3	(1)	151.3	(1)
Detroit, Mich.....	204.4	207.6	199.0	198.5	126.5	(1)	150.6	150.6	87.1	87.3	206.0	206.4	166.5	166.0
Houston, Tex.....	220.8	223.7	213.1	213.2	(1)	(1)	99.6	99.6	81.8	81.8	198.8	198.4	152.9	152.1
Indianapolis, Ind.....	211.8	216.0	195.7	(1)	129.1	(1)	155.2	154.6	86.6	86.6	191.6	(1)	160.5	(1)
Jacksonville, Fla.....	217.5	219.3	(1)	197.7	(1)	127.1	146.9	146.9	100.2	100.2	(1)	186.3	(1)	(1)
Kansas City, Mo.....	201.1	204.4	192.0	(1)	123.7	(1)	129.1	127.6	66.6	66.7	185.0	(1)	154.3	(1)
Los Angeles, Calif.....	213.1	212.1	195.3	194.5	(1)	(1)	94.0	94.0	89.3	89.3	189.0	189.0	153.6	152.8
Manchester, N. H.....	210.4	215.5	192.6	(1)	111.7	(1)	157.2	155.7	98.7	94.6	204.9	(1)	147.6	(1)
Memphis, Tenn.....	223.7	227.8	(1)	210.5	(1)	128.0	135.0	135.0	77.0	77.0	(1)	180.7	(1)	(1)
Milwaukee, Wis.....	211.2	216.3	(1)	(1)	(1)	145.5	145.5	104.5	104.5	(1)	(1)	(1)	(1)	(1)
Minneapolis, Minn.....	202.2	206.0	(1)	205.9	(1)	126.6	140.4	139.6	75.8	75.8	(1)	195.2	(1)	(1)
Mobile, Ala.....	213.8	222.1	(1)	206.7	(1)	125.5	129.8	129.8	83.9	84.0	(1)	178.6	(1)	(1)
New Orleans, La.....	220.5	227.7	(1)	(1)	(1)	113.0	113.0	75.1	75.1	(1)	(1)	(1)	(1)	(1)
New York, N. Y.....	211.5	216.2	202.1	202.9	107.5	(1)	133.2	133.3	100.6	100.6	188.2	187.5	157.8	157.1
Norfolk, Va.....	217.1	220.2	(1)	(1)	(1)	147.8	147.8	97.8	97.8	(1)	(1)	(1)	(1)	(1)
Philadelphia, Pa.....	208.4	212.0	195.8	195.0	(1)	142.6	142.6	103.0	103.0	204.9	204.6	152.1	151.8	151.1
Pittsburgh, Pa.....	215.1	219.5	233.2	232.8	119.0	(1)	138.8	138.8	103.3	103.4	205.3	205.0	147.7	146.8
Portland, Maine.....	204.1	207.0	(1)	200.6	(1)	112.4	154.5	154.4	106.5	106.5	(1)	191.2	(1)	(1)
Portland, Oreg.....	227.7	231.4	200.9	(1)	124.5	(1)	129.2	129.3	95.0	95.3	190.5	(1)	155.8	(1)
Richmond, Va.....	209.7	214.1	203.4	(1)	113.5	(1)	142.4	142.3	95.6	95.6	207.1	(1)	143.2	(1)
St. Louis, Mo.....	217.4	223.0	(1)	202.2	(1)	119.6	138.3	138.3	94.1	94.1	(1)	174.8	(1)	(1)
San Francisco, Calif.....	223.0	224.2	(1)	196.7	(1)	115.3	83.1	83.1	72.7	72.7	(1)	165.2	(1)	(1)
Savannah, Ga.....	219.2	222.4	197.0	(1)	117.9	(1)	155.8	155.8	101.5	101.5	205.6	(1)	155.4	(1)
Scranton, Pa.....	209.2	213.2	(1)	(1)	(1)	144.7	144.7	91.8	91.8	(1)	(1)	(1)	(1)	(1)
Seattle, Wash.....	217.5	221.0	(1)	(1)	(1)	125.9	124.2	91.5	91.5	(1)	(1)	(1)	(1)	(1)
Washington, D. C.....	209.2	212.9	(1)	(1)	(1)	137.3	137.3	98.6	98.6	(1)	(1)	(1)	(1)	(1)

¹ Prices of apparel, housefurnishings, and miscellaneous goods and services are obtained monthly in 10 cities and once every 3 months in 24 additional cities according to a staggered schedule.

² Rents are surveyed every 3 months in 34 large cities according to a staggered schedule.

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TABLE D-4: Indexes of Retail Prices of Foods,¹ by Group, for Selected Periods

[1935-39=100]

Miscellaneous	Year and month	All foods	Cereals and bakery products	Meats, poultry, and fish	Meats			Chickens	Fish	Dairy products	Eggs	Fruits and vegetables				Beverages	Fats and oils	Sugar and sweets		
					Total	Beef and veal	Pork					Total	Fresh	Canned	Dried					
Oct. 15, 1948	Sept. 1948	Average	124.0	105.5	101.2							129.4	136.1	169.5	173.6	124.8	175.4	131.5	126.2	175.4
	(1)	Average	137.4	115.7	117.8							127.4	141.7	210.8	226.2	122.9	152.4	170.4	145.0	120.0
153.7	1948	Average	132.5	107.6	127.1							131.0	143.8	169.0	173.5	124.3	171.0	164.8	127.2	114.3
	(1)	Average	86.5	82.6	79.3							84.9	82.3	103.5	105.9	91.1	91.2	112.6	71.1	89.6
	(1)	Average	95.2	94.5	96.6	101.1	88.9	90.5	98.8	101.0	95.9	91.0	94.5	95.1	92.3	93.3	95.5	87.7	100.6	
	(1)	August	95.5	93.4	95.7	95.4	99.6	88.0	98.8	94.6	99.6	93.1	90.7	92.4	92.8	91.6	90.3	94.9	84.5	95.6
	(1)	Average	96.6	96.8	95.8	94.4	102.8	81.1	99.7	94.8	110.6	101.4	93.8	96.5	97.3	92.4	100.6	92.5	82.2	96.8
149.3	1948	Average	105.5	97.9	107.5	106.5	110.8	100.1	106.6	102.1	124.5	112.0	112.2	103.2	104.2	97.9	106.7	101.5	94.0	106.4
157.3	1948	December	113.1	102.5	111.1	109.7	114.4	103.2	108.1	100.5	138.9	120.5	138.1	110.5	111.0	106.3	118.3	114.1	108.5	114.4
154.6	1948	Average	123.9	105.1	126.0	122.5	123.6	120.4	124.1	122.6	163.0	125.4	136.5	130.8	132.8	121.6	136.3	122.1	119.6	126.5
154.3	1948	Average	138.0	107.6	133.8	124.2	124.7	119.9	136.9	146.1	206.5	134.6	161.9	168.8	178.0	130.6	158.9	124.8	126.1	127.1
151.3	1948	Average	136.1	108.4	129.9	117.9	118.7	112.2	134.5	151.0	207.6	133.6	153.9	168.2	177.2	129.5	164.5	124.3	123.3	126.5
166.5	1948	Average	139.1	109.0	131.2	118.0	118.4	112.6	136.0	154.4	217.1	133.9	164.4	177.1	188.2	130.2	168.2	124.7	124.0	126.5
152.9	1948	August	140.9	109.1	131.8	118.1	118.5	112.6	136.4	157.3	217.8	133.4	171.4	183.5	196.2	130.3	168.6	124.7	124.0	126.6
160.5	1948	Average	159.6	125.0	161.3	150.8	150.5	148.2	163.9	174.0	236.2	165.1	168.8	182.4	190.7	140.8	190.4	189.6	152.1	143.9
(1)	June		145.6	122.1	134.0	120.4	121.2	114.3	130.0	162.8	219.7	147.8	147.1	183.5	196.7	127.5	172.5	125.4	126.4	136.2
(1)	November		187.7	140.6	203.6	197.9	191.0	207.1	205.4	188.9	265.0	198.5	201.6	184.5	182.3	167.7	251.6	167.8	244.4	170.5
154.3	1948	Average	193.8	155.4	217.1	214.7	213.6	215.9	220.1	183.2	271.4	186.2	200.8	199.4	201.5	166.2	263.5	186.8	197.5	180.0
147.6	1948	October	201.6	160.3	235.5	234.9	233.6	240.9	226.2	189.5	286.5	190.1	232.7	196.6	201.1	155.2	255.6	190.8	190.0	181.8
(1)	November		202.7	167.9	227.0	223.6	226.3	219.7	227.1	184.6	302.4	198.4	224.7	199.6	205.0	156.5	251.7	194.7	196.4	183.2
(1)	December		206.9	170.5	227.3	223.2	227.6	218.2	221.5	190.7	302.3	204.9	236.1	205.3	212.1	157.3	255.4	198.5	208.2	183.7
(1)	January		209.7	172.7	237.5	233.4	239.7	225.9	231.5	200.0	310.9	205.7	213.6	208.3	215.7	158.0	256.8	201.9	209.3	183.4
(1)	February		204.7	171.8	224.8	218.0	228.2	202.2	223.4	196.4	315.0	204.4	189.2	213.0	222.0	157.7	256.0	204.0	194.2	176.8
157.8	1948	March	202.3	171.0	224.7	218.2	228.5	204.3	216.8	194.7	313.6	201.1	186.3	206.9	214.2	157.7	253.9	204.4	191.7	174.4
(1)	April		207.9	171.0	233.8	229.5	241.2	212.3	232.6	198.4	307.2	205.8	184.7	217.4	228.4	156.4	252.1	204.4	191.4	173.6
(1)	May		210.9	171.1	244.2	242.0	255.8	219.1	253.5	202.1	305.0	204.8	184.9	218.0	229.4	156.4	250.0	204.6	196.6	173.0
152.1	1948	June	214.1	171.2	255.1	255.2	273.9	223.5	271.2	207.6	299.3	205.9	194.2	214.9	225.2	157.4	248.0	205.1	200.5	170.6
147.7	1948	July	216.8	171.0	261.8	263.0	280.9	233.8	275.0	209.3	301.6	209.0	204.3	213.4	223.2	157.7	248.0	205.2	200.8	170.9
(1)	August		216.6	170.8	267.0	269.3	286.2	246.1	266.6	207.8	304.4	211.0	220.2	199.6	204.8	157.8	249.2	205.3	197.8	172.3
155.8	1948	September	215.2	170.7	265.3	265.9	280.8	247.9	256.6	209.4	314.9	208.7	226.6	195.8	199.6	159.0	249.1	205.6	196.8	173.2
143.2	1948	October	211.5	170.0	256.1	254.3	269.8	233.9	249.4	204.0	325.9	203.0	230.0	193.5	197.3	158.9	238.1	205.9	193.0	173.1
155.4	1948																			

The Bureau of Labor Statistics retail food prices are obtained monthly during the first three days of the week containing the fifteenth of the month, through voluntary reports from chain and independent retail food dealers. Articles included are selected to represent food sales to moderate-income families.

The indexes, based on the retail prices of 50 foods, are computed by the end-base-weighted-aggregate method, using weights representing (1) relative importance of chain and independent store sales, in computing city average prices; (2) food purchases by families of wage earners and moderate-

income workers, in computing city indexes; and (3) population weights, in combining city aggregates in order to derive average prices and indexes for all cities combined.

Indexes of retail food prices in 56 large cities combined, by commodity groups, for the years 1923 through 1945 (1935-39=100), may be found in Bulletin No. 899, "Retail Prices of Food—1944 and 1945," Bureau of Labor Statistics, U. S. Department of Labor, table 2, p. 4. Mimeographed tables of the same data, by months, January 1935 to date, are available upon request.

TABLE D-5: Indexes of Retail Prices of Foods, by City

[1935-39=100]

City	Oct. 1948	Sept. 1948	Aug. 1948	July 1948	June 1948	May 1948	Apr. 1948	Mar. 1948	Feb. 1948	Jan. 1948	Dec. 1947	Nov. 1947	Oct. 1947	June 1946	Aug. 1946
United States.....	211.5	215.2	216.6	216.8	214.1	210.9	207.9	202.3	204.7	209.7	206.9	202.7	201.6	145.6	121.0
Atlanta, Ga.....	208.3	214.2	215.7	212.4	209.9	207.9	204.7	201.1	205.6	211.9	211.1	206.9	211.1	141.0	121.0
Baltimore, Md.....	224.5	228.7	228.9	227.7	225.3	221.6	217.8	212.3	214.5	220.2	217.8	211.8	211.5	152.4	121.0
Birmingham, Ala.....	210.8	216.3	219.3	218.0	212.7	209.6	207.5	207.2	211.1	218.0	217.0	212.7	210.7	147.7	121.0
Boston, Mass.....	202.6	207.2	208.8	210.2	204.1	199.2	198.2	192.2	195.0	200.3	195.7	192.4	191.8	136.0	121.0
Bridgeport, Conn.....	209.3	212.7	214.6	214.4	210.3	207.5	201.4	195.6	197.5	204.5	199.0	196.5	195.6	139.1	121.0
Buffalo, N. Y.....	206.4	210.1	213.0	212.9	211.6	207.9	200.2	196.6	196.7	202.1	200.3	194.8	193.3	140.2	121.0
Butte, Mont.....	214.9	214.5	215.1	216.6	214.7	207.4	201.3	200.5	202.1	204.8	198.8	194.2	195.0	139.7	121.0
Cedar Rapids, Iowa ¹	218.0	220.2	222.2	224.4	224.8	219.7	217.0	208.2	208.9	214.6	213.0	209.1	208.7	148.2	121.0
Charleston, S. C.....	204.9	207.7	208.0	211.4	208.1	206.7	204.8	199.1	200.2	206.6	203.1	196.9	201.4	140.8	121.0
Chicago, Ill.....	218.0	221.4	223.6	224.7	221.3	218.4	212.2	204.3	204.8	213.2	210.5	207.8	207.1	142.8	121.0
Cincinnati, Ohio.....	214.4	218.0	218.1	220.4	216.3	213.8	210.1	206.1	209.0	213.0	211.6	204.2	206.9	141.4	121.0
Cleveland, Ohio.....	220.9	225.6	229.0	226.2	223.7	218.0	213.0	209.3	212.5	217.6	212.3	206.1	208.7	149.3	121.0
Columbus, Ohio.....	197.2	200.8	202.2	201.9	199.2	196.3	193.1	190.8	192.6	196.7	194.4	190.1	192.0	136.4	121.0
Dallas, Tex.....	214.7	217.3	215.2	213.3	210.8	210.5	206.7	203.0	205.7	210.3	208.2	204.4	201.6	142.4	121.0
Denver, Colo.....	208.3	210.5	213.1	217.0	216.5	213.3	208.5	202.3	203.4	208.6	205.6	201.0	197.2	145.3	121.0
Detroit, Mich.....	204.4	207.6	210.1	213.2	211.3	206.0	203.9	197.7	199.4	205.1	202.0	196.7	199.0	145.4	121.0
Fall River, Mass.....	209.1	211.6	213.5	214.1	211.3	207.2	201.2	197.2	198.4	202.6	199.0	195.0	196.6	138.1	121.0
Houston, Tex.....	220.8	223.7	223.8	222.1	220.0	218.1	219.3	216.0	218.1	221.5	218.1	210.2	208.7	144.0	121.0
Indianapolis, Ind.....	211.8	216.0	217.1	212.6	211.5	208.0	205.7	203.8	204.2	208.2	208.8	204.3	204.5	141.5	121.0
Jackson, Miss ¹	218.6	220.7	220.6	220.8	216.7	218.0	218.3	214.6	214.6	223.3	223.2	213.1	212.6	150.6	121.0
Jacksonville, Fla.....	217.5	219.3	220.7	222.8	222.9	217.3	214.7	208.1	212.2	216.2	216.6	211.0	214.7	150.8	121.0
Kansas City, Mo.....	201.1	204.4	205.4	204.4	204.4	202.2	197.9	193.0	192.5	199.4	197.3	194.2	193.5	134.8	121.0
Knoxville, Tenn ¹	236.7	241.6	244.6	241.7	238.4	236.2	233.9	230.0	239.6	244.3	243.5	235.6	236.9	165.6	121.0
Little Rock, Ark.....	206.5	212.0	212.4	213.4	210.0	209.2	206.4	203.8	206.1	211.4	211.8	204.6	200.4	139.1	121.0
Los Angeles, Calif.....	213.1	212.1	212.7	213.1	212.1	212.6	213.9	208.9	210.9	212.2	211.1	206.7	201.9	154.8	121.0
Louisville, Ky.....	201.7	207.2	207.4	206.8	203.8	201.6	198.2	193.9	198.0	200.1	198.9	195.8	196.2	135.6	121.0
Manchester, N. H.....	210.4	215.5	217.8	218.4	213.0	208.9	204.9	202.0	203.2	208.8	204.7	199.0	198.0	144.4	121.0
Memphis, Tenn.....	223.7	227.8	227.1	229.8	226.7	223.2	222.2	219.7	224.5	230.7	229.7	226.2	223.6	153.6	121.0
Milwaukee, Wis.....	211.2	216.3	218.8	218.3	215.3	213.7	210.9	204.6	205.4	206.4	204.6	200.7	197.6	144.3	121.0
Minneapolis, Minn.....	202.2	206.0	200.2	208.2	206.2	206.0	203.0	198.1	197.2	202.6	199.3	193.7	194.6	137.5	121.0
Mobile, Ala.....	213.8	222.1	222.7	222.5	219.8	217.0	216.3	212.2	215.8	219.6	216.3	206.8	209.3	149.8	121.0
Newark, N. J.....	205.8	211.1	212.6	212.8	209.9	204.7	203.0	196.4	200.3	201.4	199.4	197.4	194.6	147.9	121.0
New Haven, Conn.....	203.5	205.3	205.6	208.3	205.4	201.2	197.7	193.0	195.8	201.5	198.9	193.4	193.8	140.4	121.0
New Orleans, La.....	220.5	227.7	228.5	232.3	227.3	223.0	228.7	224.3	225.6	226.4	222.1	220.2	219.5	157.6	121.0
New York, N. Y.....	211.5	216.2	216.9	217.9	213.9	210.0	208.6	201.2	206.7	209.7	206.1	203.9	200.6	149.2	121.0
Norfolk, Va.....	217.1	220.2	220.5	216.9	214.4	213.3	210.5	206.0	210.2	216.5	216.1	210.6	214.3	146.0	121.0
Omaha, Nebr.....	210.2	210.3	211.1	208.6	210.1	207.2	202.5	197.7	197.7	204.2	202.6	198.1	195.6	139.5	121.0
Peoria, Ill.....	222.1	230.3	230.8	224.9	227.3	223.8	217.0	205.8	208.9	219.5	224.1	220.3	212.3	151.3	121.0
Philadelphia, Pa.....	208.4	212.0	212.5	210.9	209.4	205.0	202.8	196.3	199.3	205.6	201.8	197.5	196.2	143.5	121.0
Pittsburgh, Pa.....	215.1	219.5	220.9	222.3	219.6	213.7	209.8	204.8	205.4	212.8	209.6	205.2	206.1	147.1	121.0
Portland, Maine.....	204.1	207.0	209.8	209.7	204.1	199.4	197.0	192.4	193.5	199.6	195.2	190.7	190.9	138.4	121.0
Portland, Oreg.....	227.7	231.4	234.1	233.7	228.2	229.5	223.2	220.4	219.2	223.0	219.0	214.2	208.7	158.4	121.0
Providence, R. I.....	218.4	223.8	227.2	224.9	222.0	217.9	213.1	205.5	210.5	215.0	210.5	206.1	206.5	144.0	121.0
Richmond, Va.....	209.7	214.1	211.7	209.4	205.3	203.4	200.6	197.6	201.3	209.1	207.6	201.0	205.1	138.4	121.0
Rochester, N. Y.....	200.7	207.3	209.7	211.2	208.8	205.1	200.8	196.7	196.9	202.1	200.1	194.9	192.3	142.5	121.0
St. Louis, Mo.....	217.4	223.0	225.3	224.2	222.0	218.2	213.6	210.9	212.8	217.2	215.2	209.9	200.4	147.4	121.0
St. Paul, Minn.....	199.7	203.1	204.5	204.7	203.7	203.5	200.5	195.3	194.0	196.6	195.9	191.2	191.0	137.3	121.0
Salt Lake City, Utah.....	211.2	214.7	216.0	217.1	215.8	216.8	212.9	207.3	207.9	211.3	209.7	202.6	199.4	151.7	121.0
San Francisco, Calif.....	223.0	224.2	224.3	223.2	221.6	223.4	219.5	215.3	215.4	218.9	215.7	214.4	208.8	155.5	121.0
Savannah, Ga.....	219.2	222.4	223.3	228.3	224.5	223.3	221.4	213.6	219.6	222.2	217.5	219.2	158.5	121.0	
Scranton, Pa.....	209.2	213.2	217.3	218.2	216.1	212.2	208.9	201.8	203.2	213.1	210.0	202.8	199.1	144.0	121.0
Seattle, Wash.....	217.5	221.0	221.9	223.4	220.3	221.4	218.5	212.5	214.7	218.4	213.4	207.6	205.4	151.6	121.0
Springfield, Ill.....	219.5	226.4	227.0	224.9	224.4	219.3	212.6	209.1	211.4	217.9	217.3	213.2	213.6	150.1	121.0
Washington, D. C.....	209.2	212.9	214.9	215.1	215.4	209.7	205.1	198.9	202.0	206.5	207.4	202.0	200.9	145.5	121.0
Wichita, Kans ¹	220.0	223.0	224.7	226.7	226.4	225.3	220.3	215.9	215.1	222.4	221.6	215.1	213.8	154.4	121.0
Winston-Salem, N. C.....	212.7	215.6	215.8	212.9	209.5										

TABLE D-6: Average Retail Prices and Indexes of Selected Foods

June 1946	Aug. 1948	Commodity	Average price Oct. 1948	Indexes 1935-39=100														
				Oct. 1948	Sept. 1948	Aug. 1948	July 1948	June 1948	May 1948	Apr. 1948	Mar. 1948	Feb. 1948	Jan. 1948	Dec. 1947	Nov. 1947	Oct. 1947	Aug. 1939	
145.6	92	Cereals and bakery products:																
141.0	92	Cereals:																
152.4	94	Flour, wheat.....5 pounds.	Cents	184.2	184.9	185.7	186.9	188.4	189.4	189.6	192.4	197.3	210.9	209.6	204.8	194.0	82.1	
147.7	90	Corn flakes.....11 ounces.		16.7	177.2	177.1	176.8	177.2	175.7	175.8	173.3	172.8	172.9	169.3	164.3	157.9	92.7	
138.0	93	Corn meal.....pound.		10.8	210.5	214.0	215.2	215.5	213.7	215.7	216.4	216.6	219.9	219.9	218.1	217.5	90.7	
139.1	91	Rice ¹do.		20.0	112.1	121.1	121.5	120.6	119.6	118.6	118.4	118.1	118.4	117.3	116.9	116.8	114.0	
140.2	94	Rolled oats ¹20 ounces.		17.1	155.5	155.6	155.2	155.0	154.8	154.8	153.5	153.4	153.6	152.6	151.1	143.4	(*)	
139.7	94	Bakery products:																
148.2	94	Bread, white.....pound.		13.9	162.7	163.1	163.1	163.5	163.5	163.2	163.1	163.1	162.3	159.8	157.5	149.3	93.2	
140.8	93	Vanilla cookies.....do.		44.5	193.0	192.4	191.7	192.1	190.3	188.8	189.2	187.9	187.7	183.7	180.2	178.7	176.2	(*)
142.8	92	Meats, poultry, and fish:																
141.4	90	Meats:																
149.3	93	Beef:																
136.4	93	Round steak.....do.		93.7	277.3	292.5	299.5	294.4	287.6	267.3	250.7	234.0	231.4	248.4	236.4	234.2	243.8	102.7
141.5	91	Rib roast.....do.		76.9	267.2	277.6	283.1	276.6	266.7	249.9	238.2	227.0	227.9	242.3	231.7	229.9	237.0	97.4
142.4	91	Chuck roast.....do.		67.6	301.1	315.0	322.2	315.5	309.6	283.4	263.3	249.6	250.6	263.1	251.5	253.5	260.1	97.1
145.3	92	Hamburger ¹do.		59.9	193.7	199.2	202.5	199.3	194.7	178.6	166.3	158.0	157.3	159.7	151.5	150.3	154.4	(*)
145.4	90	Veal:																
138.1	95	Cutlets.....do.		101.1	253.6	258.5	259.6	256.1	252.5	245.6	234.9	226.8	228.0	230.0	213.1	211.8	217.7	101.1
144.0	97	Pork:																
141.5	90	Chops.....do.		83.7	254.1	278.6	276.5	252.7	238.1	233.5	223.2	212.1	200.1	219.4	206.2	214.7	248.8	90.8
150.6	95	Bacon, sliced.....do.		78.9	207.0	207.2	206.3	204.5	201.9	199.1	191.3	185.7	194.7	227.7	228.8	227.6	230.4	80.9
150.8	95	Ham, whole.....do.		70.4	239.4	253.3	251.1	244.2	231.2	223.7	220.9	213.6	212.0	234.8	223.3	218.2	244.2	92.7
154.8	94	Salt pork.....do.		41.8	200.2	196.1	194.1	196.0	196.6	203.5	209.9	214.7	238.2	250.6	275.3	265.6	243.7	69.0
150.5	95	Lamb:																
134.8	91	Leg.....do.		71.9	253.4	260.7	270.8	279.4	275.6	257.6	236.3	220.3	226.9	235.2	225.0	230.7	229.8	95.7
165.6	91	Poultry: Roasting chickens.....do.		61.6	204.0	209.4	207.8	209.3	207.6	202.1	198.4	194.7	196.4	200.0	190.7	184.6	189.5	94.6
139.1	94	Fish:																
154.8	94	Fish (fresh, frozen) ¹do.		(*)	270.2	264.0	254.4	253.9	251.8	261.3	264.9	274.4	276.3	270.5	260.7	262.3	248.8	98.8
135.6	92	Salmon, pink ¹16-ounce can.		59.4	452.6	429.2	417.1	408.1	405.2	399.7	397.1	394.1	303.7	394.9	391.0	386.7	365.6	97.4
144.4	94	Dairy products:																
153.6	93	Butter.....pound.		77.4	212.7	232.7	245.6	252.0	249.8	254.2	255.4	237.4	248.4	258.1	262.0	242.2	222.4	84.0
144.3	91	Cheese.....do.		67.4	259.0	264.1	268.6	262.1	254.6	248.1	241.5	243.7	247.9	242.2	236.1	230.9	226.2	92.3
137.5	91	Milk, fresh (delivered).....quart.		22.8	186.0	185.4	182.0	177.1	174.0	171.5	174.3	174.6	174.3	173.3	171.2	171.0	167.5	97.1
149.8	91	Milk, fresh (grocery).....do.		21.6	191.1	189.4	187.8	182.1	179.3	177.3	179.0	179.5	179.7	178.5	176.3	175.2	171.8	96.3
149.9	91	Milk, evaporated.....14½-ounce can.		15.5	216.9	220.8	218.3	212.8	210.9	202.1	197.2	197.1	195.8	189.6	186.4	182.3	177.2	93.9
149.8	91	Eggs: Eggs, fresh.....dozen.		82.7	239.0	226.6	220.2	204.3	194.2	184.9	184.7	186.3	189.2	213.6	236.1	224.7	232.7	90.7
140.4	92	Fruits and vegetables:																
157.6	97	Fresh fruits:																
149.2	91	Apples.....pound.		11.5	220.7	216.7	225.1	265.3	269.2	229.1	208.2	205.6	208.6	210.2	221.8	214.3	216.1	81.6
140.4	92	Bananas.....do.		16.3	269.9	269.3	270.7	269.3	261.7	257.8	256.3	255.3	257.4	257.9	257.8	256.9	254.6	97.3
146.0	92	Oranges, size 200.....dozen.		54.3	192.1	187.2	183.3	169.2	155.1	149.2	142.9	145.1	135.9	133.5	133.4	147.9	172.2	96.9
139.5	92	Fresh vegetables:																
151.3	92	Beans, green.....pound.		16.9	155.1	172.0	176.0	187.7	185.1	229.1	229.5	191.2	257.2	199.9	186.7	237.1	215.4	61.7
143.5	92	Cabbage.....do.		5.3	139.7	136.5	139.2	155.1	180.1	202.3	250.5	174.8	191.5	222.9	237.2	192.9	165.3	103.2
147.1	92	Carrots.....bunch.		10.3	191.6	190.8	183.6	202.1	203.2	310.1	254.3	227.8	261.3	311.3	261.3	241.8	84.9	
138.4	92	Lettuce.....head.		13.4	163.0	156.2	143.1	177.8	164.1	200.7	159.9	138.0	153.5	201.0	179.9	170.8	151.6	97.6
158.4	92	Onions.....pound.		6.1	147.8	154.2	176.3	251.9	262.4	291.0	440.9	386.2	364.8	285.6	260.7	229.3	194.5	86.8
144.0	92	Potatoes.....15 pounds.		72.7	202.4	210.8	223.5	248.4	263.5	261.7	253.6	247.0	246.9	234.4	222.5	211.1	201.7	91.9
158.4	92	Spinach.....pound.		11.6	161.2	183.9	205.0	174.7	145.0	158.4	167.4	171.5	221.5	191.4	167.5	154.1	172.2	118.4
138.4	92	Sweetpotatoes.....do.		9.4	181.1	196.2	235.5	286.9	273.4	225.2	213.1	208.3	207.2	196.4	183.9	173.3	174.2	115.7
142.5	92	Canned fruits:																
142.5	92	Peaches.....No. 2½ can.		32.1	166.5	165.1	163.0	161.6	160.8	160.8	160.6	161.0	161.5	162.4	161.9	162.1	162.4	92.3
142.5	92	Pineapple.....do.		38.4	176.2	174.4	170.0	168.5	168.1	166.7	166.3	164.3	163.0	162.1	160.1	158.2	154.6	96.0
147.4	92	Canned vegetables:																
137.3	94	Corn.....No. 2 can.		19.9	160.2	159.3	158.8	158.6	158.2	157.9	156.6	156.9	157.0	156.6	155.8	152.5	149.8	88.6
161.7	94	Peas.....do.		15.3	116.7	116.9	115.8	113.5	112.8	112.3	113.5	115.5	118.0	118.0	117.9	117.9	118.0	89.8
155.5	94	Tomatoes.....do.		16.3	181.3	183.2	18											

TABLE D-7: Indexes of Wholesale Prices,¹ by Group of Commodities, for Selected Periods
[1926=100]

Year and month	All commodities ²	Farm products	Foods	Hides and leather products	Textile products	Fuel and lighting materials	Metals and metal products	Building materials	Chemicals and allied products	House-furnishing goods	Miscellaneous commodities	Raw materials	Semi-manufactured articles	Manufactured products ³	All commodities except farm products ³	All commodities the same as for farm products ³	Groceries
1913: Average	69.8	71.5	64.2	68.1	57.3	61.3	90.8	86.7	80.2	56.1	68.8	74.9	60.4	69.0	69.0	69.0	
1914: July	67.3	71.4	62.9	69.7	55.3	55.7	79.1	52.9	77.9	56.7	88.1	67.3	67.8	66.9	65.7	65.7	
1918: November	136.3	150.3	128.6	131.6	142.6	114.3	143.5	101.8	178.0	99.2	142.3	138.8	162.7	130.4	131.0	131.0	
1920: May	167.2	169.8	147.3	162.2	188.3	159.8	155.5	164.4	173.7	143.3	176.5	163.4	253.0	157.8	165.4	165.4	
1920: Average	95.3	104.9	99.9	109.1	90.4	83.0	100.5	95.4	94.0	94.3	82.6	97.5	93.9	94.5	93.2	93.2	
1932: Average	64.8	48.2	61.0	72.9	54.9	70.3	80.2	71.4	73.9	75.1	64.4	55.1	59.3	70.3	68.3	68.3	
1939: Average	77.1	65.3	70.4	95.6	69.7	73.1	94.4	90.5	76.0	86.3	74.8	70.2	77.0	80.4	79.5	79.5	
August	75.0	61.0	67.2	92.7	67.8	72.6	93.2	89.6	74.2	85.6	73.3	66.5	74.5	79.1	77.9	77.9	
1940: Average	78.6	67.7	71.3	100.8	73.8	71.7	95.8	94.8	77.0	88.5	77.3	71.9	79.1	81.6	80.8	80.8	
1941: Average	87.3	82.4	82.7	106.3	84.8	76.2	99.4	103.2	84.4	94.3	82.0	83.5	86.9	89.1	88.3	88.3	
December	93.6	94.7	90.5	114.8	91.8	78.4	103.3	107.8	90.4	101.1	87.8	92.3	90.1	94.6	90.3	90.3	
1942: Average	98.8	105.9	99.6	117.7	96.9	78.5	103.8	110.2	95.5	102.4	89.7	109.6	92.6	98.6	97.0	97.0	
1943: Average	103.1	122.6	106.6	117.5	97.4	80.8	103.8	111.4	94.9	102.7	92.2	112.1	92.9	100.1	98.7	98.7	
1944: Average	104.0	123.3	104.9	116.7	98.4	83.0	103.8	115.5	95.2	104.3	93.6	112.3	94.1	100.8	99.6	99.6	
1945: Average	105.8	128.2	106.2	118.1	100.1	84.0	104.7	117.8	95.2	104.5	94.7	116.8	95.9	101.8	100.8	100.8	
August	105.7	126.0	106.4	118.0	99.6	84.8	104.7	117.8	95.3	104.5	94.8	116.3	95.5	101.8	100.9	100.9	
1946: Average	121.1	148.9	130.7	137.2	116.3	90.1	115.5	132.6	101.4	111.6	100.3	134.7	110.8	116.1	114.9	114.9	
June	112.9	140.1	112.9	122.4	109.2	87.8	112.2	129.9	96.4	110.4	98.5	126.3	105.7	107.3	106.7	106.7	
November	130.7	169.8	165.4	172.5	131.6	94.5	130.2	145.5	118.9	118.2	106.5	153.4	129.1	134.7	132.9	132.9	
1947: Average	152.1	181.2	108.7	182.4	141.7	108.7	145.0	179.7	127.3	131.1	115.5	165.6	148.5	146.0	145.5	145.5	
October	158.8	189.7	177.7	193.1	143.4	116.1	150.5	185.8	128.6	132.4	117.1	175.2	152.6	151.2	151.5	151.5	
November	159.6	187.9	177.9	202.5	145.2	118.2	150.8	187.7	135.8	137.5	118.8	175.5	154.9	152.4	153.1	153.1	
December	163.2	196.7	178.4	203.4	148.0	124.6	151.5	191.0	135.0	139.4	121.5	182.0	156.5	154.9	155.6	155.6	
1948: January	165.7	190.2	179.9	200.3	148.4	130.0	154.3	193.3	138.8	141.3	123.6	183.9	156.8	157.8	158.2	158.2	
February	160.9	185.3	172.4	192.8	148.9	130.8	155.3	192.7	134.6	141.8	120.1	174.9	155.2	154.5	155.3	155.3	
March	161.4	186.0	173.8	185.4	149.8	130.9	155.9	193.1	136.1	142.0	120.8	174.7	152.9	155.8	155.7	155.7	
April	162.8	186.7	176.7	186.1	150.3	131.6	157.2	195.0	136.2	142.3	121.8	175.5	154.1	157.6	157.3	157.3	
May	163.9	180.1	177.4	188.4	150.2	132.6	157.1	196.4	134.7	142.6	121.5	177.6	153.8	158.5	158.2	158.2	
June	166.2	196.0	181.4	187.7	149.6	133.1	158.5	196.8	135.8	143.2	121.5	182.6	154.5	159.6	159.4	159.4	
July	168.7	195.2	188.3	180.2	149.4	135.7	162.2	199.9	134.4	144.5	120.3	184.3	155.9	162.6	162.6	162.6	
August	169.5	191.0	189.5	188.4	148.9	136.6	170.9	203.6	132.0	145.4	119.7	182.0	159.6	164.6	164.6	164.6	
September	168.6	189.1	186.3	187.5	147.8	136.7	171.9	203.9	133.3	146.6	119.9	180.5	158.8	163.8	163.8	163.8	
October	165.0	182.2	177.3	185.5	146.8	137.2	172.4	203.3	134.4	147.4	119.0	176.2	158.4	160.1	160.9	160.9	

¹ BLS wholesale price data, for the most part, represent prices in primary markets. They are prices charged by manufacturers or producers or are prices prevailing on organized exchanges. The weekly index is calculated from 1-day-a-week prices; the monthly index from an average of these prices. Monthly indexes for the last 2 months are preliminary.

The indexes currently are computed by the fixed base aggregate method, with weights representing quantities produced for sale in 1929-31. (For a detailed description of the method of calculation see "Revised Method of Calculation of the Bureau of Labor Statistics Wholesale Price Index," in the Journal of the American Statistical Association, December 1937.)

Because of past differences in the method of computation the weekly and monthly indexes should not be compared directly. The weekly index is

useful only to indicate week-to-week changes and to provide later data for price movements. It is not revised to take account of more complete reports.

Mimeographed tables are available, upon request to the Bureau, giving monthly indexes for major groups of commodities since 1890 and for subgroups and economic groups since 1913. Weekly indexes have been prepared since 1913.

² Includes current motor vehicle prices beginning with October 1946. The rate of production of motor vehicles in October 1946 exceeded the monthly average rate of civilian production in 1941, and in accordance with the announcement made in September 1946, the Bureau introduced current prices for motor vehicles in the October calculations. During the war, no vehicles were not produced for general civilian sale and the Bureau carried 1942 prices forward in each computation through September 1946.

³ Corrected.

TABLE D-8: Indexes of Wholesale Prices,¹ by Group of Commodities, by Weeks
(Indexes 1926=100. Not directly comparable with monthly data. See footnote 1, table D-7)

Week ending	All commodities	Farm products	Foods	Hides and leather products	Textile products	Fuel and lighting materials	Metals and metal products	Building materials	Chemicals and allied products	House-furnishing goods	Miscellaneous commodities	Raw materials	Semi-manufactured products	Manufactured products	All commodities except farm products	All commodities the same as for farm products	Groceries
<i>1948</i>																	
Sept. 4	167.4	187.8	184.0	180.2	147.8	137.6	172.0	203.2	132.1	146.9	118.5	180.7	158.7	163.0	162.8	162.8	
Sept. 11	168.0	188.1	185.9	188.8	147.5	137.6	172.0	203.1	133.2	147.7	119.9	180.9	158.6	163.9	163.4	163.4	
Sept. 18	169.2	190.1	189.9	188.2	147.2	137.7	172.4	203.2	132.5	147.8	120.3	182.0	158.6	165.7	164.7	164.7	
Sept. 25	168.7	190.8	187.8	187.9	146.7	137.8	171.8	202.9	133.5	147.8	119.3	182.4	158.3	164.4	163.8	163.8	
Oct. 2	167.1	186.4	183.9	187.9	146.5	138.2	171.8	203.1	133.6	147.9	119.1	179.7	158.5	163.1	162.8	162.8	
Oct. 9	164.6	181.5	178.0	187.8	146.9	138.8	171.9	202.7	138.5	148.5	118.4	176.7	158.3	160.5	160.8	160.8	
Oct. 16	164.8	182.2	178.0	187.6	146.8	138.1	172.5	203.6	134.4	148.6	118.7	177.2	158.3	160.6	160.9	160.9	
Oct. 23	165.3	183.8	178.8	186.0	146.2	138.1	172.6	203.7	133.2	148.9	118.6	178.2	158.1	160.9	161.1	161.1	
Oct. 30	163.8	180.7	174.8	187.4	145.7	138.0	172.7	203.5	134.3	149.2	119.0	176.2	158.2	159.4	160.0	160.0	
Nov. 6	162.7	178.9	171.6	185.7	145.7	138.0	173.0	203.6	135.0	149.3	118.5	175.1	158.7	158.1	159.0	159.0	
Nov. 13 ²	162.6	179.5	170.4	186.5	145.7	138.2	173.1	203.3	132.7	149.9	119.2	175.4	158.8	157.8	158.8	158.8	

¹ See footnote 1, table D-7.

² Last computation of this weekly index. New indexes comparable to the

monthly index will appear in the January 1949 issue of the Monthly Labor Review. Also see Monthly Labor Review for September 1948 (p. 290).

Periods

TABLE D-9: Indexes of Wholesale Prices,¹ by Group and Subgroup of Commodities

[1926=100]

All com- modi- ties except farm prod- ucts ²	Group and subgroup	1948										1947			1946	1939
		Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	June	Aug.
		165.0	* 168.6	169.5	168.7	166.2	163.9	162.8	161.4	160.9	165.7	163.2	159.6	158.5	112.9	75.0
	All commodities ³	182.2	189.1	191.0	195.2	196.0	189.1	186.7	186.0	185.3	199.2	196.7	187.9	189.7	140.1	61.0
	Agricultural products	170.4	176.9	179.2	190.6	209.2	213.5	217.9	218.0	220.0	256.3	252.7	245.5	241.4	151.8	51.5
	Grains	223.4	244.2	250.0	250.8	239.5	219.0	204.4	209.4	210.0	232.9	226.3	211.0	224.5	137.4	66.0
	Livestock and poultry	159.6	158.2	157.8	161.9	165.4	163.3	166.4	162.2	169.9	162.4	162.5	157.2	153.7	137.5	60.1
	Other farm products	177.3	186.3	189.5	188.3	181.4	177.4	176.7	173.8	172.4	179.9	178.4	177.9	177.7	112.9	67.2
	Dairy products	174.9	179.9	185.1	182.9	181.3	176.6	181.0	179.8	184.8	183.9	183.5	175.9	167.3	127.3	67.9
	Cereal products	149.6	153.3	154.0	154.5	155.1	156.3	158.0	158.6	160.2	170.1	170.6	172.1	166.7	101.7	71.9
	Fruits and vegetables	137.3	139.4	140.5	151.2	147.7	147.0	148.6	145.7	144.5	140.7	135.4	135.5	130.8	136.1	58.5
	Meats	239.8	266.5	273.7	263.8	241.3	233.2	226.0	217.1	206.2	222.3	214.8	217.6	230.0	110.1	73.7
	Other foods	146.9	147.0	146.9	148.5	148.1	144.2	144.4	144.3	146.7	155.0	160.0	159.4	157.2	98.1	60.3
	Hides and leather products	185.5	187.5	188.4	189.2	187.7	188.4	186.1	185.4	192.8	200.3	203.4	202.5	193.1	122.4	92.7
	Shoes	189.7	190.0	189.4	186.3	185.8	185.6	191.7	193.8	194.7	194.3	190.7	187.0	180.6	129.5	100.8
	Hides and skins	202.0	210.6	212.1	220.3	215.2	218.0	199.3	186.2	207.2	238.9	256.9	263.2	243.7	121.5	77.2
	Leather	180.4	181.9	186.0	189.2	186.9	188.2	183.6	185.9	199.6	209.4	217.2	216.9	205.0	110.7	84.0
	Other leather products	148.6	148.6	149.9	150.9	150.9	143.3	143.8	143.8	143.8	141.8	141.3	139.6	115.2	97.1	
	Textile products	146.8	147.8	148.9	149.4	149.6	150.2	150.3	149.8	148.9	148.4	148.0	145.2	143.4	109.2	67.8
	Clothing	148.3	148.1	148.3	148.3	145.2	145.8	144.6	144.7	143.4	137.8	137.1	136.2	120.3	81.5	
	Cotton goods	195.0	199.8	205.3	209.3	213.1	217.8	219.2	218.3	214.9	214.8	213.7	209.3	204.7	139.4	65.5
	Hosiery and underwear	104.6	104.8	104.9	104.9	105.3	105.4	105.4	105.4	105.0	104.4	103.0	101.4	100.0	75.8	
	Rayon	41.8	41.8	41.6	40.7	40.7	40.7	40.7	40.7	40.7	40.7	40.7	37.0	37.0	30.2	28.5
	Silk	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	73.3	73.3	71.2	(*)	44.3	
	Woolen and worsted goods	150.7	150.0	149.4	147.5	147.5	147.5	147.5	145.7	143.0	141.9	139.6	134.9	134.3	112.7	75.5
	Other textile products	190.5	* 189.3	186.6	184.5	183.1	174.2	170.0	174.7	180.2	181.2	178.3	174.9	175.6	112.3	63.7
	Fuel and lighting materials	137.2	136.7	136.6	135.7	133.1	132.6	131.6	130.9	130.8	130.0	124.6	118.2	116.1	87.8	72.6
	Anthracite	136.4	136.5	136.0	131.6	127.1	125.5	124.6	124.5	124.2	123.4	123.4	123.1	106.1	72.1	
	Bituminous coal	195.1	* 195.1	194.6	193.1	182.6	181.8	178.9	177.9	176.8	174.3	173.7	172.6	132.8	96.0	
	Coke	218.7	217.5	217.4	212.3	206.6	205.4	197.5	196.6	190.6	183.4	182.2	182.0	133.5	104.2	
	Electricity	(*)	(*)	65.5	66.4	65.7	65.4	66.1	65.7	66.6	66.4	66.5	66.3	64.9	67.2	75.8
	Gas	(*)	90.7	86.9	90.4	90.7	89.3	89.1	88.7	85.8	84.5	85.4	83.6	86.8	79.6	86.7
	Petroleum and products	122.8	122.2	122.1	122.1	122.1	122.1	121.8	121.7	120.7	112.0	99.9	96.5	94.0	51.7	
	Metals and metal products ²	172.4	171.9	* 170.9	162.2	158.5	157.1	157.2	155.9	155.3	154.3	151.5	150.8	150.5	112.2	93.2
	Agricultural machinery and equipment ²	142.5	* 140.4	135.6	134.1	132.2	130.5	129.8	129.3	128.9	128.6	127.0	125.5	122.8	104.5	93.5
	Farm machinery ²	144.8	* 142.6	137.7	136.3	134.1	132.1	131.3	130.8	130.4	130.0	128.6	127.0	124.1	104.9	94.7
	Iron and steel	164.4	* 164.0	* 163.1	153.2	149.4	148.9	149.4	147.7	146.3	144.6	140.2	139.5	139.3	110.1	95.1
	Motor vehicles ²	175.2	175.0	174.1	168.2	163.9	161.7	161.6	161.6	161.6	160.8	160.3	159.9	135.5	92.5	
	Nonferrous metals	167.0	166.4	165.9	153.7	152.1	150.0	149.8	146.8	146.8	145.5	143.0	142.2	142.0	99.2	74.6
	Plumbing and heating	157.3	* 157.0	* 153.9	145.3	145.3	143.2	138.7	138.7	138.7	138.8	136.1	136.1	106.0	79.3	
	Building materials	203.3	203.9	203.6	199.9	196.8	196.4	195.0	193.1	192.7	193.3	191.0	187.7	185.8	129.9	89.6
	Brick and tile	159.4	158.9	158.6	157.9	153.3	152.8	151.6	151.1	150.9	148.8	148.1	146.4	121.3	90.5	
	Cement	133.7	133.3	133.2	132.2	128.8	128.2	127.5	127.4	127.2	126.5	121.6	120.6	120.1	102.6	91.3
	Lumber	314.5	317.1	319.5	318.1	313.2	312.9	309.2	303.8	303.8	307.3	303.2	296.0	290.2	176.0	90.1
	Paint and paint materials	159.6	159.5	158.1	157.9	158.7	158.4	158.6	156.7	159.6	163.2	164.0	161.8	160.7	108.6	82.1
	Plumbing and heating	157.3	* 157.0	* 153.9	145.3	145.3	143.2	138.7	138.7	138.7	138.8	136.1	136.1	106.0	79.3	
	Structural steel	178.8	178.8	178.8	159.6	153.3	153.3	155.8	155.8	149.4	143.0	143.0	143.0	120.1	107.3	
	Other building materials	174.8	174.8	173.4	167.1	163.5	163.1	162.2	161.8	159.8	157.9	155.5	152.6	118.4	89.5	
	Chemicals and allied products	134.4	133.3	132.0	134.4	135.8	134.7	136.2	136.1	134.6	138.8	135.0	135.8	128.6	96.4	74.2
	Chemicals	127.6	126.0	126.3	127.8	126.2	125.9	126.8	126.8	126.5	125.8	124.1	124.3	122.1	98.0	83.8
	Drug and pharmaceutical materials	152.6	152.7	153.3	153.6	153.7	153.3	153.8	154.4	154.3	154.4	154.9	151.1	137.5	109.4	77.1
	Fertilizer materials	117.2	116.2	114.9	115.0	113.9	115.0	115.2	114.9	115.1	115.7	114.4	112.4	111.6	82.7	65.5
	Mixed fertilizers	107.9	107.8	105.9	104.4	103.2	103.2	103.1	103.1	102.8	102.4	101.5	100.8	97.7	86.6	73.1
	Oils and fats	189.4	188.6	180.3	192.2	212.7	205.0	212.3	211.4	201.5	236.7	215.9	226.7	193.4	102.1	40.6
	Housefurnishing goods	147.4	* 146.6	145.4	144.5	143.2	142.6	142.3	142.0	141.8	141.3	139.4	137.5	132.4	110.4	85.6
	Furnishings	152.3	* 151.5	149.3	148.6	146.7	145.8	145.2	144.7	144.4	143.8	142.8	140.5	139.4	114.5	90.0
	Furniture ²	142.5	* 141.6	141.6	140.4	139.9	139.6	139.4	139.4	139.1	136.2	134.7				

E: Work Stoppages

TABLE E-1: Work Stoppages Resulting From Labor-Management Disputes¹

Month and year	Number of stoppages		Workers involved in stoppages		Man-days idle during month or year	
	Beginning in month or year	In effect during month	Beginning in month or year	In effect during month	Number	Percent of estimated working time
1935-39 (average).....	2,862		1,130,000		16,900,000	
1945.....	4,750		3,470,000		35,000,000	
1946.....	4,985		4,600,000		116,000,000	
1947.....	3,603		2,170,000		34,600,000	
1947: October.....	219	393	64,300	171,000	1,780,000	
November.....	178	328	57,200	139,000	820,000	
December.....	119	236	32,300	56,900	590,000	
1948: January ²	175	250	75,000	100,000	1,000,000	
February ²	200	300	70,000	110,000	725,000	
March ²	225	350	500,000	580,000	6,000,000	
April ²	275	400	175,000	625,000	8,000,000	
May ²	275	425	165,000	350,000	4,100,000	
June ²	310	475	165,000	240,000	2,000,000	
July ²	335	525	225,000	300,000	2,200,000	
August ²	335	525	150,000	225,000	1,750,000	
September ²	250	450	160,000	275,000	2,400,000	
October ²	240	425	110,000	200,000	2,000,000	

¹ All known work stoppages, arising out of labor-management disputes, involving six or more workers and continuing as long as a full day or shift are included in reports of the Bureau of Labor Statistics. Figures on "workers involved" and "man-days idle" cover all workers made idle in establish-

ments directly involved in a stoppage. They do not measure the indirect or secondary effects on other establishments or industries whose employees are made idle as a result of material or service shortages.

² Preliminary estimates.

F: Building and Construction

TABLE F-1: Expenditures for New Construction¹

[Value of work put in place]

Type of construction	Expenditures (in millions)												1947 Total	1947 Total	
	1948														
	Nov. ³	Oct. ³	Sept. ³	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Total	Total
Total new construction ⁴	\$1,559	\$1,705	\$1,782	\$1,790	\$1,715	\$1,616	\$1,461	\$1,311	\$1,168	\$1,009	\$1,157	\$1,320	\$1,432	\$13,977	\$10,600
Private construction.....	1,176	1,263	1,332	1,354	1,318	1,235	1,120	1,024	940	837	948	1,097	1,141	10,893	8,200
Residential building (nonfarm).....	600	650	685	695	680	635	585	525	475	400	500	610	630	5,260	3,100
Nonresidential building (nonfarm) ⁵	328	331	334	332	324	305	277	264	266	273	284	287	313	3,131	2,100
Industrial.....	113	113	113	111	110	110	111	116	120	125	130	134	136	1,702	1,000
Commercial.....	112	115	122	127	125	116	97	87	88	84	85	91	93	835	510
Warehouses, office and loft buildings.....	38	36	35	34	29	28	25	23	22	22	24	22	19	216	130
Stores, restaurants, and garages.....	74	79	87	93	96	88	72	64	66	62	61	69	74	619	380
Other nonresidential building.....	103	103	99	94	89	79	69	61	58	56	58	59	58	594	360
Religious.....	28	27	26	23	21	18	16	14	13	12	13	13	13	118	80
Educational.....	25	26	25	24	22	19	17	16	15	15	16	17	17	164	100
Hospital and institutional.....	11	11	10	10	10	10	10	9	9	9	9	9	9	107	60
Remaining types ⁶	39	39	38	37	36	32	26	22	21	20	20	20	19	205	120
Farm construction.....	22	39	63	82	81	62	50	37	23	14	14	15	25	450	300
Public utilities.....	226	243	250	245	233	233	208	198	176	158	161	188	199	2,052	1,300
Railroad.....	32	34	36	36	33	30	26	25	23	21	24	28	30	318	200
Telephone and telegraph.....	55	60	61	57	55	63	60	63	54	48	45	55	53	510	330
Other public utilities.....	139	149	153	152	145	140	122	110	99	89	92	105	116	1,224	800
Public construction.....	383	442	450	445	397	381	341	287	226	172	209	223	291	3,084	2,200
Residential building.....	3	4	5	5	5	5	5	6	5	6	9	8	8	182	120
Nonresidential building (other than military or naval facilities).....	107	106	102	96	88	79	77	71	65	49	53	52	50	505	330
Industrial ⁷	1	2	2	2	2	2	2	2	1	1	1	0	0	25	15
Educational.....	60	58	56	52	48	43	40	37	36	30	32	32	29	275	180
Hospital and institutional.....	25	24	23	22	18	15	15	13	10	7	8	8	8	81	50
All other nonresidential.....	21	22	21	20	20	19	20	19	18	11	13	12	13	124	80
Military and naval facilities.....	11	12	13	13	12	11	13	13	12	11	14	17	19	204	130
Highways.....	135	180	190	200	169	167	136	98	57	41	56	65	65	1,233	750
Sewer and water.....	43	47	44	41	41	40	39	38	33	25	27	28	32	331	200
Miscellaneous public-service enterprises ⁸	8	10	10	9	10	10	11	9	9	6	8	8	10	117	80
Conservation and development.....	61	67	69	65	58	56	47	41	36	28	33	36	41	396	260
All other public ⁹	15	16	17	16	14	13	13	11	9	6	9	9	12	116	100

¹ Joint estimates of the Bureau of Labor Statistics, U. S. Department of Labor, and the Office of Domestic Commerce, U. S. Department of Commerce. Estimated construction expenditures represent the monetary value of the volume of work accomplished during the given period of time. These figures should be differentiated from permit valuation data reported in the tabulations for urban building authorized and the data on value of contract awards reported in table F-2.

² Preliminary.

³ Revised.

⁴ Includes major additions and alterations.

⁵ Excludes nonresidential building by privately owned public utilities.

⁶ Includes social and recreational buildings, hotels, and miscellaneous buildings not elsewhere classified.

⁷ Excludes expenditures to construct facilities used in atomic energy projects.

⁸ Covers primarily publicly owned electric light and power systems and local transit facilities.

⁹ Covers miscellaneous construction items such as airports, monuments, memorials, etc.

TABLE F-2: Value of Contracts Awarded and Force-Account Work Started on Federally Financed New Construction, by Type of Construction¹

Period	Total new construction ²	Airports ³	Residential	Value (in thousands)										Highways	All other ⁴		
				Building						Conservation and development							
				Nonresidential			Hospital and institutional			Administration and general ⁵		Other non-residential					
				Total	Edu-cational ⁶	Total	Total	Vet-erans ⁷	Other	(8)	(8)	(8)	(8)	Total	Re-clama-tion	River, har-bor, and flood control	
\$1,533,439	(7)	\$561,394	\$63,465	\$497,929	(8)	(8)	(8)	(8)	(8)	\$189,710	\$73,797	\$115,913	\$511,685	\$270,650			
1,586,604	\$4,753	669,222	231,071	438,151	(8)	(8)	(8)	(8)	(8)	225,423	115,612	109,811	355,701	331,505			
7,775,497	579,176	6,130,389	540,472	5,580,917	(8)	(8)	(8)	(8)	(8)	217,795	150,708	67,087	347,988	500,149			
1,450,282	14,859	549,656	435,453	114,203	(8)	(8)	(8)	(8)	(8)	300,405	160,253	131,152	535,784	49,548			
1,294,069	24,645	276,514	51,186	225,328	\$47,692	\$101,831	\$96,123	\$5,708	\$31,159	\$44,646	308,029	77,095	230,934	657,087	27,794		
October	111,191	4,503	7,928	586	7,342	1,198	705	668	37	1,578	3,861	20,650	3,967	16,683	73,720	4,390	
November	114,096	772	16,351	711	15,640	912	9,991	9,961	30	3,506	1,231	46,049	628	45,421	49,220	1,704	
December	112,388	806	32,973	104	32,869	913	26,433	26,378	55	3,332	2,191	19,541	6,928	12,613	54,349	4,719	
January	105,737	808	14,136	149	13,987	253	8,818	8,603	215	1,961	2,955	41,585	4,667	36,918	47,268	1,940	
February	155,428	645	46,632	859	45,773	168	41,762	41,557	205	1,735	2,108	57,361	1,229	56,132	49,426	1,364	
March	145,350	5,322	63,193	61	63,132	256	59,131	58,920	211	1,230	2,515	21,793	6,639	15,154	51,561	3,481	
April	154,375	2,521	9,867	553	9,314	12	5,606	5,049	557	1,863	1,833	79,782	56,934	22,848	58,247	3,958	
May	114,040	1,199	24,712	364	24,348	468	20,215	20,045	170	1,861	1,804	10,309	4,738	5,571	75,648	2,172	
June	134,800	2,003	35,989	825	35,164	89	15,156	13,739	417	9,696	10,223	23,628	8,877	14,751	68,486	4,694	
July	137,730	1,578	9,944	254	9,690	0	6,691	1,493	5,198	1,185	1,814	41,546	1,327	40,219	78,428	6,234	
August	123,433	1,997	6,384	120	6,264	2	4,402	872	3,530	887	973	21,982	4,269	17,713	91,305	1,765	
September ⁸	117,055	423	18,793	66	18,727	31	13,364	13,178	186	2,190	3,142	28,479	2,959	25,520	65,965	3,395	
October ⁹	118,098	(8)	25,320	777	24,543	0	21,527	6,311	15,216	1,310	1,706	31,991	19,033	12,968	55,731	5,056	

¹ Excludes projects classified as "secret" by the military, and all construction for the Atomic Energy Commission. Data for Federal-aid programs cover amounts contributed by both the owner and the Federal Government.

² Includes major additions and alterations.

³ Excludes hangars and other buildings, which are included under "Other residential" building construction.

⁴ Includes educational facilities under the Federal temporary reuse educational facilities program.

⁵ Includes post offices, armories, offices, and customs houses.

⁶ Includes electrification projects, water-supply and sewage-disposal systems, forestry projects, railroad construction, and other types of projects not elsewhere classified.

⁷ Included in "All other."

⁸ Unavailable.

⁹ Revised.

¹⁰ Preliminary.

TABLE F-3: Urban Building Authorized, by Principal Class of Construction and by Type of Building

Period	Total all classes ¹	Valuation (in thousands)								Number of new dwelling units—Housekeeping only			
		New residential building								Privately financed			
		Housekeeping				Publicly financed dwelling units	Non-housekeeping ²	New nonresidential building	Additions, alterations, and repairs				
		Privately financed dwelling units		Total	1-family	2-family ³	Multi-family ⁴			Total	1-family	2-family ³	Multi-family ⁴
1942	\$2,707,873	\$506,570	\$478,658	\$42,629	\$77,283	\$296,933	\$22,910	\$1,510,688	\$278,472	184,892	138,908	15,747	30,237
1946	4,743,414	2,114,833	1,830,260	103,042	181,531	355,587	43,369	1,458,602	771,023	430,195	358,151	24,326	47,718
1947	5,549,718	2,880,926	2,361,509	156,408	363,000	35,177	29,831	1,712,672	891,112	501,353	393,550	34,150	73,644
1947: September	561,536	208,186	251,286	14,780	37,120	2,229	4,060	162,234	89,807	51,877	40,834	2,992	8,051
October	604,165	340,627	275,691	18,032	46,904	3,795	3,450	168,334	87,957	55,870	42,825	3,536	9,509
November	501,566	256,728	201,262	15,724	30,742	6,519	5,620	166,472	66,217	41,010	30,284	3,316	7,410
December	479,881	227,675	179,806	11,951	35,918	2,992	2,284	177,315	69,615	36,088	26,596	2,443	7,049
1948: January	426,531	198,668	150,879	11,501	36,318	6,616	3,224	152,086	65,907	32,523	23,704	2,280	6,539
February	414,339	202,050	146,934	8,954	46,162	9,237	1,441	141,188	60,423	32,166	22,180	1,863	8,123
March	631,621	321,562	252,778	20,016	48,768	597	4,082	222,565	82,815	50,788	37,520	4,092	9,176
April	714,954	411,300	317,892	34,372	59,036	1,960	6,166	196,095	99,433	64,387	45,700	6,997	11,690
May	657,480	349,949	291,208	17,895	40,846	5,393	2,729	205,619	93,790	52,811	41,423	3,769	7,619
June	699,657	365,656	301,598	16,432	47,626	3,350	4,711	219,962	105,978	54,112	42,106	3,327	8,679
July	650,119	320,797	264,509	15,899	40,389	10,969	3,167	219,598	95,588	46,573	36,661	2,971	6,941
August ⁵	648,261	349,593	264,588	13,568	71,437	7,761	3,186	193,667	94,054	46,951	35,894	2,328	8,729
September ⁶	586,375	268,037	228,046	13,845	26,146	14,628	3,162	215,545	55,003	39,370	31,748	2,797	4,825

¹ Building for which building permits were issued and Federal contracts awarded in all urban places, including an estimate of building undertaken in some smaller urban places that do not issue permits.

The data cover federally and non-federally financed building construction combined. Estimates of non-Federal (private, and State and local government) urban building construction are based primarily on building-permit reports received from places containing about 85 percent of the urban population of the country; estimates of federally financed projects are compiled from notifications of construction contracts awarded, which are obtained from other Federal agencies. Data from building permits are not adjusted to allow for lapsed permits or for lag between permit issuance and the start of construction. Thus, the estimates do not represent construction actually started during the month.

Urban, as defined by the Bureau of the Census, covers all incorporated places of 2,500 population or more in 1940, and, by special rule, a small number of unincorporated civil divisions.

² Covers additions, alterations, and repairs, as well as new residential nonresidential building.

³ Includes units in 1-family and 2-family structures with stores.

⁴ Includes units in multifamily structures with stores.

⁵ Covers hotels, dormitories, tourist cabins, and other nonhousekeeping residential buildings.

⁶ Revised.

⁷ Preliminary.

of Building
ing units—House
only

TABLE F-4: New Nonresidential Building Authorized in All Urban Places,¹ by General Type and by Geographic Division²

	Pub lic b- u- nace	Geographic division and type of new nonresidential building	Valuation (in thousands)												1947	1946	
			1948						1947								
			Sept. ³	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.		
\$215, 545	\$193, 667	\$219, 508	\$219, 962	\$205, 619	\$196, 096	\$222, 565	\$141, 188	\$152, 086	\$177, 315	\$166, 472	\$168, 334	\$162, 234	\$1, 712, 674	\$1, 458, 602			
New England	9, 576	10, 532	15, 340	20, 512	10, 142	10, 279	8, 960	5, 236	26, 689	6, 307	14, 753	12, 395	10, 949	109, 831	108, 716		
Middle Atlantic	29, 355	32, 814	30, 752	32, 431	50, 897	27, 338	55, 770	20, 497	9, 305	42, 529	23, 513	21, 465	18, 845	271, 742	195, 151		
East North Central	55, 257	49, 368	57, 717	55, 231	37, 567	45, 082	33, 614	26, 458	21, 268	29, 084	36, 414	44, 187	36, 338	372, 866	338, 659		
West North Central	14, 359	17, 027	12, 114	13, 671	12, 079	14, 985	16, 434	16, 566	8, 813	19, 008	12, 263	13, 476	12, 217	132, 163	112, 927		
South Atlantic	24, 201	17, 104	34, 905	24, 933	19, 745	22, 840	25, 267	14, 562	18, 547	21, 403	15, 958	19, 182	17, 781	200, 042	171, 247		
East South Central	9, 708	8, 649	6, 392	8, 682	7, 798	6, 176	9, 902	3, 928	7, 152	7, 327	5, 076	6, 159	6, 175	73, 138	65, 583		
West South Central	25, 387	14, 884	25, 965	20, 319	24, 584	21, 805	21, 558	27, 433	27, 121	17, 923	26, 079	15, 366	19, 454	193, 072	132, 641		
Mountain	18, 289	8, 567	7, 778	4, 429	7, 818	6, 240	8, 724	3, 826	2, 761	4, 067	3, 828	5, 449	6, 039	58, 162	40, 287		
Pacific	29, 413	34, 722	28, 636	39, 754	34, 989	41, 350	42, 340	22, 682	30, 460	29, 669	28, 590	30, 657	34, 424	301, 658	208, 391		
Industrial buildings ⁴	21, 139	27, 068	24, 387	32, 832	26, 233	26, 899	32, 910	16, 883	17, 453	33, 524	22, 702	25, 194	27, 806	321, 847	397, 237		
New England	914	546	3, 526	2, 365	2, 360	971	1, 806	1, 051	803	1, 642	2, 601	1, 920	2, 504	25, 952	19, 477		
Middle Atlantic	3, 054	7, 243	5, 155	4, 938	8, 375	7, 518	6, 823	3, 699	2, 250	7, 053	3, 067	4, 963	4, 668	57, 755	77, 845		
East North Central	9, 423	9, 511	9, 217	15, 602	7, 997	9, 262	9, 513	3, 859	5, 477	10, 137	9, 012	9, 342	9, 538	118, 666	133, 599		
West North Central	755	1, 958	713	2, 039	908	3, 081	1, 728	1, 205	971	1, 781	1, 384	1, 671	2, 010	19, 890	29, 161		
South Atlantic	1, 262	1, 670	1, 180	2, 159	1, 496	1, 519	4, 469	1, 640	1, 927	3, 851	1, 410	1, 714	1, 304	20, 549	34, 612		
East South Central	508	1, 023	452	1, 465	691	225	1, 088	330	466	1, 489	981	717	1, 557	13, 573	14, 688		
West South Central	980	1, 799	1, 836	1, 023	1, 316	760	2, 409	1, 637	1, 641	2, 666	1, 456	1, 282	1, 516	17, 519	13, 145		
Mountain	367	120	65	248	147	79	383	119	380	181	359	257	504	2, 852	4, 417		
Pacific	3, 876	3, 198	2, 243	2, 993	2, 943	3, 484	4, 691	3, 343	3, 568	4, 724	2, 432	3, 328	4, 205	45, 091	70, 203		
Commercial buildings ⁵	93, 638	79, 526	92, 057	82, 407	84, 424	83, 852	82, 366	47, 315	72, 617	65, 591	66, 927	78, 647	82, 681	686, 920	669, 574		
New England	5, 688	4, 718	5, 780	7, 307	3, 275	3, 401	2, 547	1, 257	12, 431	1, 804	3, 367	4, 203	32, 853	43, 164			
Middle Atlantic	10, 595	12, 884	13, 177	13, 508	10, 550	11, 506	12, 753	5, 411	15, 222	8, 114	10, 739	7, 641	90, 725	74, 569			
East North Central	20, 923	15, 725	17, 174	17, 903	14, 660	15, 198	10, 010	7, 891	10, 188	11, 518	13, 767	15, 739	14, 846	119, 958	119, 011		
West North Central	9, 391	7, 128	6, 575	4, 647	6, 022	5, 692	8, 286	2, 586	5, 171	6, 885	5, 215	5, 960	6, 342	57, 240	51, 822		
South Atlantic	10, 953	10, 426	13, 501	10, 361	11, 923	13, 498	9, 118	8, 170	7, 445	7, 949	7, 721	10, 423	11, 353	106, 788	87, 405		
East South Central	3, 502	3, 864	3, 202	3, 232	3, 375	3, 891	3, 245	2, 027	4, 172	1, 978	2, 582	3, 619	2, 997	34, 680	34, 647		
West South Central	17, 793	12, 324	8, 120	13, 455	10, 441	10, 917	8, 062	12, 036	8, 705	8, 292	9, 968	11, 651	91, 548	82, 156			
Mountain	2, 183	4, 965	4, 192	2, 761	3, 275	3, 747	4, 968	2, 093	1, 484	1, 651	2, 753	2, 950	3, 370	26, 855	26, 057		
Pacific	12, 610	12, 740	16, 132	14, 568	17, 889	16, 478	20, 492	9, 518	14, 278	11, 879	15, 116	15, 046	20, 248	126, 273	150, 743		
Community buildings ⁶	66, 891	57, 046	67, 786	66, 074	66, 775	51, 410	78, 228	58, 666	34, 404	49, 975	48, 969	37, 262	23, 340	406, 890	190, 163		
New England	1, 580	4, 137	3, 443	8, 780	3, 457	4, 255	3, 477	1, 465	5, 944	938	5, 110	4, 214	788	25, 759	19, 739		
Middle Atlantic	11, 580	9, 125	8, 658	8, 753	26, 082	4, 373	32, 780	10, 049	666	20, 629	10, 419	2, 418	4, 538	80, 190	21, 247		
East North Central	11, 429	13, 394	21, 303	14, 105	10, 354	13, 954	8, 707	10, 980	2, 623	4, 336	5, 355	9, 798	3, 553	62, 541	42, 412		
West North Central	2, 589	3, 521	2, 736	3, 994	2, 528	2, 665	3, 796	11, 998	787	7, 752	3, 760	4, 174	1, 410	34, 639	19, 160		
South Atlantic	7, 833	3, 869	10, 567	6, 508	2, 887	4, 761	9, 623	3, 341	7, 570	3, 617	5, 151	5, 149	2, 091	40, 161	22, 570		
East South Central	3, 905	2, 249	2, 591	2, 931	1, 243	1, 134	675	1, 757	3, 239	709	1, 427	1, 111	16, 895	12, 954			
West South Central	4, 596	4, 481	9, 545	8, 835	7, 999	7, 359	6, 463	16, 591	11, 007	4, 313	18, 456	2, 907	4, 193	65, 309	26, 963		
Mountain	14, 174	2, 578	2, 825	566	3, 907	1, 299	2, 778	608	409	1, 270	392	1, 659	1, 117	18, 366	5, 367		
Pacific	9, 205	13, 532	6, 415	11, 942	6, 630	11, 501	9, 468	2, 950	3, 641	3, 881	4, 617	5, 516	3, 639	63, 030	20, 751		
Public buildings ⁷	6, 188	5, 155	5, 629	14, 736	4, 206	5, 508	7, 055	5, 323	5, 577	4, 556	4, 920	1, 767	3, 744	40, 699	12, 042		
New England	166	100	55	613	90	121	455	1, 250	2, 289	502	834	355	0	3, 418	371		
Middle Atlantic	1, 259	498	337	2, 463	1, 147	659	488	112	214	219	200	3	10	4, 712	1, 493		
East North Central	14	3, 385	3, 700	1, 276	101	475	849	568	684	900	802	386	1, 444	8, 171	880		
West North Central	34	138	36	754	26	1, 500	124	77	535	200	26	86	108	1, 696	190		
South Atlantic	1, 441	47	913	1, 449	91	648	394	349	30	92	244	237	7	6, 285	988		
East South Central	1, 280	0	0	1, 029	413	209	3, 374	417	206	150	166	55	135	830	116		
West South Central	782	260	286	1, 467	333	203	496	566	1, 023	551	1, 842	165	615	4, 430	665		
Mountain	877	73	68	475	36	341	61	259	113	180	0	99	362	2, 416	70		
Pacific	335	654	234	5, 210	2, 059	1, 352	814	1, 725	483	1, 762	806	381	1, 003	8, 741	7, 269		
Buildings ⁸	15, 425	11, 870	17, 846</														

TABLE F-5: Number and Construction Cost of New Permanent Nonfarm Dwelling Units Started, Urban or Rural Location, and by Source of Funds¹

Period	Number of new dwelling units started									Estimated construction costs (in thousands) ²		
	All units			Privately financed			Publicly financed					
	Total nonfarm	Urban	Rural nonfarm	Total nonfarm	Urban	Rural nonfarm	Total nonfarm	Urban	Rural nonfarm	Total	Privately financed	Publicly financed
1925 ³	937,000	752,000	185,000	937,000	752,000	185,000	0	0	0	\$4,475,000	\$4,475,000	
1933 ⁴	93,000	45,000	48,000	93,000	45,000	48,000	0	0	0	285,446	285,446	
1941 ⁵	706,100	434,300	271,800	619,511	369,499	250,012	86,589	64,801	21,788	2,825,895	2,530,765	\$29,111
1944 ⁶	141,900	96,200	45,600	138,602	93,216	45,476	3,108	2,984	124	495,064	483,231	\$2,830
1946	670,500	403,700	266,800	662,473	395,673	266,800	8,027	8,027	0	3,769,767	3,713,776	\$1,055
1947	849,000	479,800	369,200	845,560	476,360	369,200	3,440	3,440	0	5,642,798	5,617,425	\$2,352
1947: First quarter	138,100	81,000	57,100	137,016	79,916	57,100	1,084	1,084	0	808,263	800,592	
January	39,300	24,200	15,100	38,216	23,116	15,100	1,084	1,084	0	223,577	215,906	
February	42,800	25,000	17,800	42,800	25,000	17,800	0	0	0	244,425	244,425	
March	56,000	31,800	24,200	56,000	31,800	24,200	0	0	0	340,261	340,261	
Second quarter	217,200	119,100	98,100	217,000	118,900	98,100	200	200	0	1,361,677	1,360,477	
April	67,100	37,600	29,500	67,100	37,600	29,500	0	0	0	418,451	418,451	
May	72,900	39,300	33,600	72,900	39,300	33,600	0	0	0	452,236	452,236	
June	77,200	42,200	35,000	77,000	42,000	35,000	200	200	0	400,990	489,790	
Third quarter	261,200	142,200	119,000	260,733	141,733	119,000	467	467	0	1,774,150	1,770,475	
July	81,100	44,500	36,600	81,100	44,500	36,600	0	0	0	539,333	539,333	
August	86,300	47,400	38,900	86,108	47,208	38,900	192	192	0	589,470	587,742	
September	93,800	50,300	43,500	93,525	50,025	43,500	275	275	0	645,347	643,400	
Fourth quarter	232,500	137,500	95,000	230,811	135,811	95,000	1,689	1,689	0	1,698,708	1,685,881	
October	94,000	53,200	40,800	93,540	52,740	40,800	460	460	0	678,687	675,197	
November	79,700	48,000	31,700	78,835	47,135	31,700	965	965	0	584,731	578,324	
December	58,800	36,300	22,500	58,436	35,936	22,500	364	364	0	435,290	432,360	
1948: First quarter	177,300	101,200	76,100	174,996	99,052	75,944	2,304	2,148	156	1,287,460	1,268,661	
January	52,600	30,400	22,200	51,776	29,603	22,173	824	797	27	372,657	365,886	
February	49,600	28,800	20,800	48,445	27,774	20,671	1,155	1,026	129	363,421	354,218	
March	75,100	42,000	33,100	74,775	41,675	33,100	325	325	0	551,382	548,557	
Second quarter ⁷	295,700	165,500	130,200	291,828	163,812	128,016	3,872	1,688	2,184	2,246,248	2,210,485	
April	98,800	54,400	44,400	97,518	54,156	43,362	1,282	244	1,038	720,713	717,996	
May	99,400	56,700	42,700	97,902	55,603	42,209	1,498	1,007	491	753,661	739,605	
June	97,500	54,400	43,100	96,408	53,963	42,445	1,092	437	655	762,874	752,884	
Third quarter ⁸	258,000	149,700	44,300	93,640	49,340	44,300	360	360	0	2,038,349		
July ⁹	94,000	49,700	(*)	93,640	49,340	(*)	360	360	0	725,900	723,032	
August ⁹	83,000	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	675,654	(*)	
September ⁹	81,000	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	636,795	(*)	

¹ The estimates shown here do not include temporary units, conversions, dormitory accommodations, trailers, or military barracks. They do include prefabricated housing units.

These estimates are based on building-permit records, which, beginning with 1945, have been adjusted for lapsed permits and for lag between permit issuance and start of construction. They are based also on reports of Federal construction contract awards and beginning in 1946, on field surveys in nonpermit-issuing places. The data in this table refer to nonfarm dwelling units started, and not to urban dwelling units authorized, as shown in table F-3.

All of these estimates contain some error. In 1948, for example, if the estimate of nonfarm starts is 50,000, the chances are about 19 out of 20 that an actual enumeration would produce a figure between 47,600 and 52,400. In 1946 and 1947, the range of error was approximately twice as large. The

reduction was achieved by improvements in estimating and survey techniques.

² Private construction costs are based on permit valuation, adjusted understatement of costs shown on permit applications. Public construction costs are based on contract values or estimated construction costs for individual projects.

³ Housing peak year.

⁴ Depression, low year.

⁵ Recovery peak year prior to wartime limitations.

⁶ Last full year under wartime control.

⁷ Revised.

⁸ Preliminary.

⁹ Not available.

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Started,

construction
thousands)

Privately financed	Public financed
475,000	
285,446	
830,765	
483,231	
713,776	
617,425	
800,592	
215,906	
244,425	
340,261	
360,477	
418,451	
452,236	
489,790	
770,475	
139,333	
87,742	
43,400	
85,881	
75,197	
78,324	
32,360	
88,661	
45,886	
14,218	
8,557	
0,485	
7,996	
0,605	
2,884	
1,032	
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Subject Index to Volume 67 Monthly Labor Review

July to December 1948

UNITED STATES DEPARTMENT OF LABOR

Maurice J. Tobin, *Secretary*

BUREAU OF LABOR STATISTICS

Ewan Clague, *Commissioner*



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